

Hab. Peru.

A gibbous shortly truncated shell, rapidly acuminate anteriorly, very finely cancellated throughout.

Species 31. (Mus. Cuming.)

DONAX LÆVIGATA. *Don. testā rotundato-cuneatā, lævigatā, politā, striis obsolete radiatā, lutescente-spadiceā, ad marginem cærulescente; umbonibus cærulescentibus, luteo maculatis; latere antico acuminato-rotundato, postico brevissimo, abruptè truncato.*

THE SMOOTH DONAX. Shell rotundately wedge-shaped, smooth, polished, obsoletely rayed with striæ; yellowish-fawn, bluish at the margin; umboes bluish, yellow-tipped; anterior side acuminately rounded, posterior side very short, abruptly truncated.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. — ?

Distinguished by its polished oblong-rounded form, and very abruptly truncated posterior side.

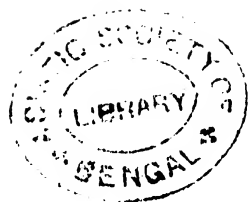
Species 32. (Mus. Cuming.)

DONAX SORDIDA. *Don. testā trigono-cuneatā, compressā, densissimè radialim liratā, ad aream posticam decussatim crispato-serratā, sordidè albā, latere antico trigono-acuminato, postico acutè angulato, subconcavo-truncato.*

THE DIRTY DONAX. Shell triangularly wedge-shaped, compressed, very closely radiately ridged, on the posterior area decussately crisply serrated, dirty-white, anterior side triangularly acuminate, posterior sharply angled, and subconcavely truncated.

Hab. — ?

A very characteristic species, singularly resembling in its general contour the multivalve shell of the cirrhipede *Anatifa lævis*.





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DONAX.

PLATE VI.

Species 33. (Mus. Cuming.)

DONAX ACUTANGULA. *Don. testā elongato-oblongā, curvatā, subensiformi, eburneā, lævigatā, nitente, sub lente striis tenuissimis decussatā, valdē inequilaterali, latere antico rotundato, postico acutè angulato, concavo-truncato; areā subtilissimè fimbriato-striatā.*

THE SHARP-ANGLED DONAX. Shell elongately oblong, curved, somewhat sword-shaped, ivory-white, smooth, shining, beneath the lens decussated with very fine striæ, very inequilateral, anterior side rounded, posterior sharply angled, and concavely truncated; the area very finely fimbriately striated.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. Mouth of the Gaboon, West Africa.

A very delicate subtransparent ensiform species, very abruptly angularly truncated at the posterior end, the anterior being very elongately produced.

Species 34. (Mus. Cuming.)

DONAX NITIDA. *Don. testā lanceolato-oblongā, subtriangulā, gibbosulā, lævigatā, nitente, eburneā, ad umbones obsolete carneo biradiatā, latere antico acuminato-producto, postico declivi-truncato, angulato; areā subconcauā, concentricè corrugato-liratā.*

THE SHINING DONAX. Shell lanceolately oblong, somewhat triangular, rather gibbous, smooth, shining, ivory-white, marked with two obsolete flesh-rays at the umboes, anterior side acuminately produced, posterior slantingly truncated, angled; area subconcave, concentrically wrinkle-ridged.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. East Australia; Strange.

Chiefly distinguished by its slantingly acuminate sides, and by the posterior area being conspicuously wrinkle-ridged, while the rest of the shell is smooth and highly polished.

Species 35. (Mus. Cuming.)

DONAX PULCHELLA. *Don. testā elongato-oblongā, medio subcompressā, cinereo-albā, griseo radiatā et fasciatā, concentricè striatā, obsolete radiatim sulcatā, latere antico subangustè acuminato, postico brevissimo, obtusè angulato et rotundato, margine crenato.*

THE PRETTY DONAX. Shell elongately oblong, a little compressed in the middle, ash-white, banded and

rayed with grey, concentrically striated, obsolete radiately grooved, anterior side rather narrowly acuminate, posterior very short, obtusely angled and rounded, margin crenated.

HANLEY, Pro. Zool. Soc. 1843, p. 6.

Hab. West Indies.

A narrow oblong species, a little compressed in the middle, of a greyish-white, rayed and banded with blackish-grey.

Species 36. (Mus. Cuming.)

DONAX TRANSVERSA. *Don. testā angustè elongatā, tenuiculā, gibbosā, utrinque hianle, lævigatā, sub lente obsolete striatā, lutescente-albā, olivaceo-carneo fasciatā et latiradiatā; umbonibus violaceo radiatis, valdē inequilaterali; latere antico recto, versus marginem declivi-rotundato, postico abruptè truncato, acutè angulato, ad angulum crenato; areā concavā, tenuiliratā.*

THE TRANSVERSE DONAX. Shell narrowly elongated, rather thin, gibbous, gaping at each end, smooth, beneath the lens obsolete striated, yellowish-white, banded and broadly rayed with olive-flesh; umboes violet-rayed, very inequilateral; anterior side straight, slantingly rounded towards the margin, posterior abruptly truncated, sharply angled, keeled at the angle; area concave, finely ridged.

SOWERBY, Tankerville Catalogue, App. p. 4. no. 226.

Hab. — ?

An extremely characteristic species, of straight elongated growth, gaping at both ends, stained with violet in the interior.

Species 37. (Mus. Cuming.)

DONAX OWENII. *Don. testā elongato-ovatā, convexo-compressā, lævigatā, sub lente striis subtilissimè decussatā; albidā, lutescente versus marginem obscure radiatā, umbonibus violaceo radiatis; latere antico acuminato-rotundato, postico declivi-truncato, areā concavā, concentricè corrugato-liratā.*

OWEN'S DONAX. Shell elongately ovate, convexly compressed, smooth, beneath the lens very finely decussately striated; whitish, obscurely rayed with yellow towards the margin, umboes rayed with violet; anterior side acuminately rounded, posterior slantingly truncated; area concave, concentrically wrinkle-ridged.

GRAY, MS. in Brit. Mus.; Hanley, Cat. Recent Shells, p. 81.

Hab. West Coast of Africa.

Of convexly elongated growth, obtusely angled at the posterior end, where the area, unlike the rest of the shell, is closely wrinkle-ridged.

Species 38. (Mus. Cuming.)

DONAX GRACILIS. *Don. testâ trigono-elongatâ, ad marginem arcuatâ et compressâ, versus umbones gibbosâ, lævigatâ, epidermide sordidè olivaceâ corneâ inulatâ; latere antico rotundato, subrostrato, postico declivi-truncato, obtusè angulato.*

THE SLENDER DONAX. Shell triangularly elongated, arched and compressed at the margin, gibbous towards the umboes, smooth, covered with a dull olivaceous horny epidermis; anterior side rounded, slightly beaked, posterior slantingly truncated, obtusely angled.

HANLEY, MS. (Mus. Cuming.)

Hab. Gulf of Guayaquil; Cuming.

A smooth species, having somewhat the appearance of a narrow elongated *Capsa*.

Species 39. (Mus. Cuming.)

DONAX SCALPELLUM. *Don. testâ angustè elongatâ, rectâ, subcompressâ, utrinque paululum hiantè, lævigatâ, politâ, albidâ, livido-purpurascente radiatâ et pallidè tinctâ, valdè inæquilaterali; latere antico rotundato, postico declivi-truncato; arcâ subconcarâ, nilidè concentricè liratâ.*

THE LANCET DONAX. Shell narrowly elongated, straight, rather compressed, a little gaping at both ends, smooth, polished; whitish, rayed and faintly tinged with livid purple, very inequilateral; anterior side rounded, posterior slantingly truncated, area rather hollow, neatly concentrically ridged.

GRAY, Annals of Philosophy; and Wood, Index Testaceologicus, Supp. pl. 2. f. 1.

Hab. Gulf of California.

Of a peculiar straight *Solen*-like growth, smooth and highly polished, except on the posterior area, which is neatly concentrically ridged.

Species 40. (Mus. Cuming.)

DONAX CALIFORNICA. *Don. testâ oblongo-ovalâ, subcurvatâ, griseo-albâ, nigricante-ceruleo fasciatâ et latiradiatâ, radiatim obsolete densè sulcatâ, umbonibus*

violaceo eximè biradiatis; subæquilaterali, lateribus rotundatis, postico vix angulato.

THE CALIFORNIAN DONAX. Shell oblong-ovate, somewhat curved, greyish-white, banded and broad-rayed with blackish-blue, radiately obsolete densely grooved, umboes marked with two small violet rays; nearly equilateral, sides rounded, the posterior scarcely angled.

CONRAD, Journ. Acad. Nat. Sci. Philadelphia, vol. vii. pl. 19. f. 21.

Hab. Gulf of California.

This species, wanting the posterior truncated area so characteristic of the genus, has more the form of a *Tellina*.

Species 41. (Mus. Cuming.)

DONAX BELLA. *Don. testâ oblongo-ovalâ, subtrigonâ, posticè gibbosâ, lævigatâ, nitente, obsolete densè sulcato-radiatâ, eburneâ, radiis angustis roseis ornatâ; latere antico rotundato, postico declivi-truncato, vix angulato.*

THE NEAT DONAX. Shell oblong-ovate, somewhat triangular, gibbous posteriorly, smooth, shining, obsolete densely groove-rayed, ivory-white, ornamented with narrow pink rays; anterior side rounded, posterior slantingly truncated, scarcely angled.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. Acapulco.

A delicately painted species, rather swollen towards the posterior side, and truncated obtusely.

Species 42. (Mus. Cuming.)

DONAX POLITA. *Don. testâ angustè oblongo-ovalâ, complanatâ, spadiceo-fuscescente undique tinctâ, et pallidè lentiginosâ et fasciatâ, subæquilaterali; lateribus rotundatis, postico sub umbones paululum truncato.*

THE POLISHED DONAX. Shell narrowly oblong-ovate, smooth, everywhere stained with fawn-brown, and faintly freckled and banded, nearly equilateral; sides rounded, posterior slightly truncated beneath the umboes.

POLI, Test. Siciliæ, pl. 21. f. 14, 15.

Psammobia polita, Da Costa.

Donax complanatus, Montagu.

Capsa complanata, Sowerby.

Donax longa, Philippi.

Hab. Mediterranean and South Britain.

This species partakes so much of the form and character of *Cytherea*, as hardly to come into the present genus. It has been referred both to *Capsa* and *Psammobia*.

CONCHOLOGIA ICONICA:

OR,

ILLUSTRATIONS

OF THE

HELLS OF MOLLUSCOUS ANIMALS.



VOL. VIII.

CONTAINING MONOGRAPHS OF THE GENERA

PECTEN.
HINNIES.
MACTRA.

LUTRARIA.
AMPHIDESMA.
MESODESMA.

DONAX.
PATELLA.
NASSA.

BY

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HISTORY OF NEW YORK.

"Hail to thy face and odours, glorious sea!
The spirit of the universe in thee
Is visible; thou hast in thee the life,
The eternal, graceful, and majestic life,
Of nature: and the natural human heart?
Is therefore bound to thee with holy love."—*Campbell*

LONDON:

LOVELL REEVE, HENRIETTA STREET, COVENT GARDEN.

1855.



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47b



48a



48b



49c



49

MONOGRAPH

OF THE GENUS

P E C T E N .

'How sweet to muse upon the skill display'd
(Infinite skill!) in all that He hath made,
To trace in Nature's most minute design
The signature and stamp of power divine."—*Cowper*

DONAX.

PLATE VII.

Species 43. (Mus. Cuming.)

DONAX GRANIFERA. *Don. testā trigono-ovatā, solidiusculā, gibbosā, creberrimè radiatim lineari-sulcatā, posticè densè corrugato-granosā, albidā, umbonibus violaceo remotè biradiatis; latere antico acuminato-rotundato, postico brevissimo, abruptè angulato-truncato.*

THE GRAINED DONAX. Shell triangularly ovate, rather solid, gibbous, very closely radiately linearly grooved, posteriorly densely wrinkle-grained, white, umbones distantly two-rayed with violet; anterior side acuminate rounded, posterior very short, and abruptly angularly truncated.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. — ?

A stout white broadly triangular species, very abruptly angularly truncated.

Species 44. (Mus. Cuming.)

DONAX VENUSTA. *Don. testā oblongo-ovatā, subtrigonā, compressā, levigatā, politā, posticè concentricè semi-sulcatā, pallidè roseo-co-spadicē, albiradiatā; latere antico rotundato, postico obtusè declivi-angulato; areā concentricè sulcatā.*

THE HANDSOME DONAX. Shell elongately ovate, subtriangular, compressed, smooth, polished, posteriorly concentrically half-grooved, pale rose-fawn, white-rayed; anterior side rounded, posterior obtusely slantingly angled; area concentrically grooved.

POLL, Test. utr. Siciliæ, pl. 19. f. 23, 24.

Hab. Mediterranean.

A polished shell, distinguished in all its varieties by a few concentric grooves on the posterior side, near the ventral margin.

Species 45. (Mus. Cuming.)

DONAX VARIEGATA. *Don. testā subelongato-oblongā, compressiusculā, levigatā, politā, albidā, aurantio-tinctā, fusco nitidè radiatim reticulatā; latere antico subacuminato-rotundato, postico brevi, obtusè declivi-angulato.*

THE VARIEGATED DONAX. Shell subelongately oblong, rather compressed, smooth, polished, whitish, stained

with orange, neatly radiately reticulated with brown; anterior side rather acuminate rounded, posterior short, obtusely slantingly angled.

Hab. — ?

A small polished compressed species, distinguished by its orange-fawn colour, and pretty radiately reticulated painting.

Species 46. (Mus. Cuming.)

DONAX LUBRICA. *Don. testā sublatè trigonā, compressā, concentricè irregulariter striatā, posticè radiatim lineari-sulcatā, cinerascēte, saturatè fasciatā; latere antico rotundato, postico brevissimo, obtusè truncato.*

THE SLIMY DONAX. Shell rather broadly triangular, compressed, concentrically irregularly striated, posteriorly linearly radiately grooved, pale ash, darker banded; anterior side rounded, posterior very short, obtusely truncated.

HANLEY, MS. (Mus. Cuming.)

Hab. — ?

Of a broadly triangular form, with an extremely contracted posterior side, compressed throughout.

Species 47. (Fig. a, b, Mus. Cuming.)

DONAX VARIABILIS. *Don. testā trigono-oblongā, subangustā, radiatim lineari-sulcatā, lutescente aut albidā aut variè roseo-radialā; latere antico acuminato-rotundato, postico lato, brevissimo, acutè angulato.*

THE VARIABLE DONAX. Shell triangularly oblong, rather narrow, radiately linearly grooved, yellowish or white, or variously pink-rayed; anterior side acuminate rounded, posterior broad, very short, sharply angled.

SAY, American Conchology, pl. 61. f. 1.

Hab. United States.

Chiefly distinguished by its pinched acuminate rounded anterior end.

Species 48. (Mus. Cuming.)

DONAX DENTICULATA. *Don. testā trigono-cuneatā, crassiusculā, densè lineari-sulcatā, albidā, rufo et griseo variè radiatā, interdum auriatā; latere antico sub-*

attenuato-rotundato, postico gibboso, biangulato; areâ internâ corrugatâ.

THE SMALL-TOOTHED DONAX. Shell triangularly wedge-shaped, rather thick, densely linearly grooved, whitish, variously red and grey rayed, sometimes orange; anterior side somewhat attenuately rounded, posterior side gibbous, two-angled; inner area wrinkled.

LINNÆUS, Syst. Nat. (12th edit.) p. 1127.

Hab. West Indies.

A rather stout solid species, strongly linearly grooved throughout, double-angled on the posterior side, the area of the inner angle being wave-wrinkled.

Species 49. (Mus. Cuming.)

DONAX OBESA. *Don. testâ abbreviato-trigonâ, gibbosâ, obesâ, radiatim tenuè lineari-sulcatâ, sulcis minutissimè decussatis, latere antico subacuminato, postico obtusè globoso-truncato, albâ, posticè griseo-tinctâ.*

THE STOUT DONAX. Shell shortly triangular, gibbous, stout, radiately finely linearly grooved, grooves very minutely decussated, anterior side subacuminated, posterior obtusely globosely truncated, white, posteriorly stained with grey.

D'ORBIGNY, Voy. dans l'Amérique Méridionale.

Hab. Real Llejos, Central America; Cuming.

A small species, of peculiarly short stout swollen growth.







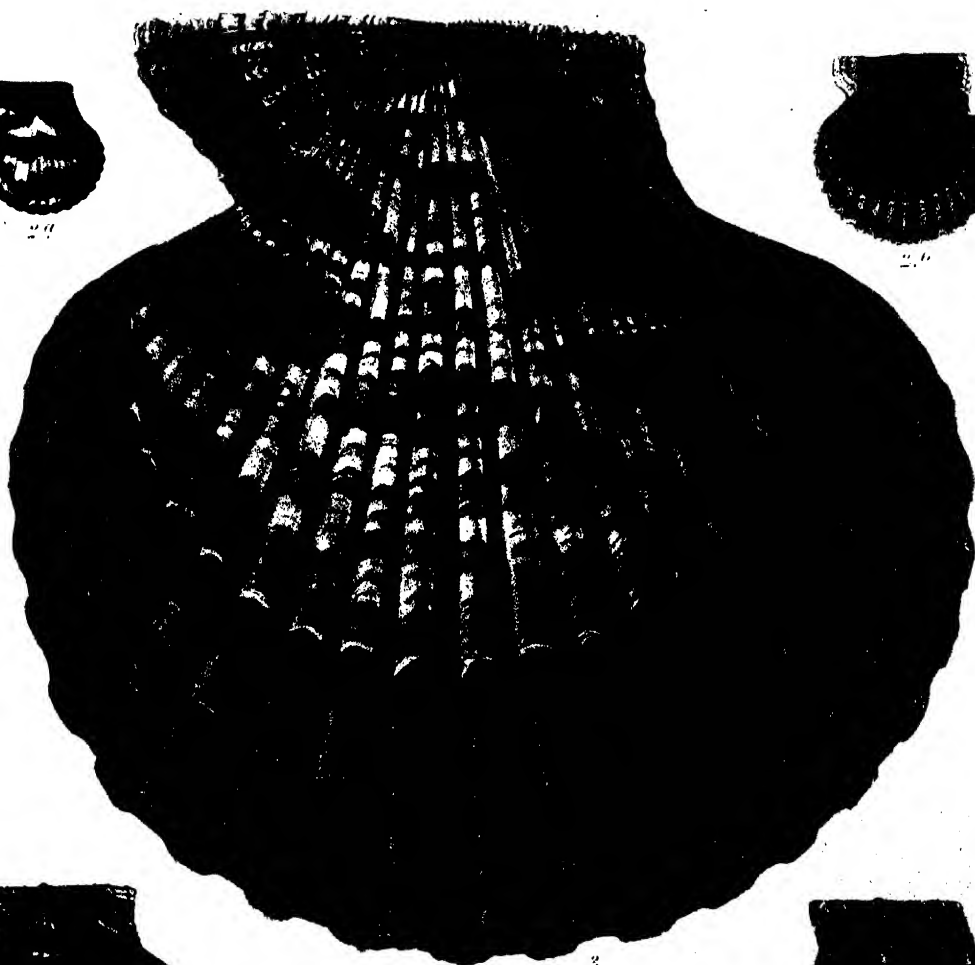
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PECTEN.

PLATE I.

Species 1. (Fig. 1 and 6, Mus. Cuming.)

PECTEN INÆQUALIS. *Pect. testā inæquali, subrotundatā, posticè paululum expansā, undique confertim et minutissimè concentricè striatā, auriculis inæqualibus; valvā sinistrā planulatā, umbones versus paululum elevata, costis octodecim ad viginti elevatis subangulatis, interstitiis excavatis, radiatā, griseā, nigricante-cinereo profusè oblique strigatā, maculis perpaucis albis notatā; valvā dextrā valde convexā, ventricosā, costis octodecim sublioribus radiatā, albicante, maculis pallidè cinereo-fuscescentibus sparsim tinctā; lateribus saturatè strigatis.*

THE INEQUIVALVE PECTEN. Shell inequivalve, nearly round, a little expanded posteriorly, closely and very minutely concentrically striated throughout, ears unequal; left valve flattened, a little raised towards the umboes, rayed with eighteen to twenty raised slightly angular ribs, interstices excavated, grey, profusely obliquely streaked with blackish-ash, and marked with a few white spots; right valve very convex, ventricose, rayed with eighteen rather broader ribs, whitish, sparingly stained with pale ash-brown spots; sides darkly streaked.

SOWERBY, Thesaurus Conch. vol. i. p. 50. pl. 19. f. 193-5.
Hab. Philippine Islands; Cuming.

The obliquely streaked ash marking and the few scattered opake-white spots are very characteristic in this species.

Species 2. (Fig. 2 a, Mus. Cuming.)

PECTEN SUGILLATUS. *Pect. testā suborbiculari, æquali, æquilaterali, auriculis inæqualibus; valvis convexis, costis duabus et viginti subangulatis paululum squamatis radiatis, interstitiis concentricè elevato-striatis; albidā, livido-olivaceo aurantioque marmoratā.*

THE BRUISED PECTEN. Shell nearly orbicular, equivalve, equilateral, ears unequal; valves convex, rayed with two-and-twenty subangled slightly squamate ribs, with the interstices concentrically elevately striated; whitish, marbled with livid-olive and orange.

Hab. —?

The under valve is similarly coloured to the upper, but in a lighter degree.

Species 3. (Mus. Cuming.)

PECTEN NOBILIS. *Pect. testā æquali, subgibbosā, radiatim costatā, costis duabus et viginti, rotundatis, elevatiusculis, concentricè lenniter crebrè squamato-liratis, interstitiis latiusculis, longitudinaliter triulcatis; carneo-albidā, roseo-rufō undique maculatā et variegatā; auriculis valde inæqualibus, radiatim squamato-liratis.*

THE NOBLE PECTEN. Shell equivalve, somewhat gibbous, radiately ribbed, ribs two-and-twenty, rounded, rather raised, concentrically finely closely squamately ridged, interstices rather broad, longitudinally three-grooved; flesh-white, spotted and variegated throughout with rose-red; ears very unequal, radiately squamately ridged.

Hab. Japan.

This fine species, newly received from Japan, differs in being of a rounder form than its nearest ally, and not squamate on the ribs, the sculpture consisting merely of very thin short scale-like ridges.

Species 4. (Mus. Cuming.)

PECTEN SOWERBYI. *Pect. testā subæquali, orbiculari, depressiusculā, subæquilaterā, auriculis viz inæqualibus; valvā sinistrā concentricè creberrimè elevato-striatā, costis quatuordecim angustis sublioribus radiatā, costis livido-nigricantibus, interstitiis fulvis, ambabus punctis cærulescentibus undique densè aspersis; valvā dextrā costis latis quatuordecim radiatā, albā.*

SOWERBY'S PECTEN. Shell nearly equivalve, orbicular, rather depressed, nearly equilateral, ears but little unequal; left valve concentrically very closely elevately striated, rayed with fourteen rather distant narrow ribs, ribs livid-blackish, interstices fulvous, both densely sprinkled throughout with light blue dots; right valve rayed with fourteen broad ribs, white.

Pecten aspersus, Sowerby (not of Lamarck), Pro. Zool. Soc. 1835, p. 110.

Hab. Tumbes, Peru.

Readily distinguished by the characteristic sprinkling of light bluish dots upon the dark slate-colouring of the left valve, the right valve being colourless.

DONAX.

PLATE VIII.

Species 50. (Mus. Cuming.)

DONAX MADAGASCARIENSIS. *Don. testâ abbreviato-triangulari, peculiariter diagonaliter undato-costatâ, latere postico abruptè plano-angulato, interstitiis areæ cancellatis, antico compressè angulato-acuminato; albidâ, epidermide fulvâ indutâ.*

THE MADAGASCAR DONAX. Shell shortly triangular, peculiarly diagonally wave-ribbed, posterior side abruptly flatly angled, interstices of the area cancellated, anterior compressly angularly acuminate; whitish, covered with a fulvous epidermis.

WOOD, Index Testaceologicus, Supp. *Donax*, fig. 3.

Donax Keyi, A. Adams.

Hab. Madagascar.

Peculiarly characterized by a sculpture of diagonally cross-waved ribs.

Species 51. (Mus. Cuming.)

DONAX PETALLINA. *Don. testâ subangustè oblongâ, tenui, semipellucidâ, subæquilaterali, minutissimè radiatim striatâ, pellucido-albâ, purpurascente latè biradiatâ; lateribus rotundatis, subæqualibus, postico latiore; umbonibus parvis, subcentralibus.*

THE LITTLE PETAL DONAX. Shell rather narrowly oblong, thin, semitransparent, nearly equilateral, very minutely radiately striated, transparent-white, broadly two-rayed with light purple; sides rounded, nearly equal, posterior the broader; umboes small, nearly central.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. —?

A very delicate subtransparent shell, marked with two broad rays of light purple, with the sides nearly equal.

Species 52. (Mus. Cuming.)

DONAX ÆNEA. *Don. testâ angustè oblongâ, striis sub lente minutissimè decussatâ, sordidè albâ, obscurè biradiatâ, eximie iridescente; latere antico acuminato-rotundato, postico obtusè declivi-angulato.*

THE BRASS DONAX. Shell narrowly oblong, beneath the lens very minutely decussated with striæ; dirty-white, faintly two-rayed, delicately iridescent; an-

terior side acuminate rounded, posterior obtusely slantingly angled.

MORCH, Kierulf Cat.; Deshayes, Pro. Zool. Soc. March, 1854.

Hab. —?

A minute dull white shell, apparently smooth, but decussated beneath the lens with fine striæ and delicately iridescent.

Species 53. (Mus. Cuming.)

DONAX INCARNATA. *Don. testâ latissimè trigonâ, solidiusculâ, compressâ, obscurè radiatim sulcatâ, posticè conspicuè undato-corrugatâ, interstitiis cancellatis; lutescente-incarnatâ; latere antico subacuminato, postico brevissimo, obtusè angulato.*

THE FLESH-TINTED DONAX. Shell very broadly triangular, rather solid, compressed, obscurely radiately grooved, posteriorly conspicuously wave-wrinkled, with the interstices cancellated; yellowish flesh-tinted; anterior side subacuminated, posterior very short, obtusely angled.

CHEMNITZ, Conch. Cab. vol. vi. p. 265. pl. 26. f. 259.

Hab. —?

Of a particularly broadly angled form, the umboes seeming unusually elevated, with the obtuse posterior angle strongly diagonally wave-wrinkled.

Species 54. (Mus. Cuming.)

DONAX DYSONI. *Don. testâ trigono-cuneatâ, minutissimè decussatim striatâ, posticè fortiter concentricè liratâ, interstitiis cancellatis; albidâ, ad umbones livido-purpurascente radiatâ; latere antico rotundato, postico brevissimo, vix angulato.*

DYSON'S DONAX. Shell triangularly wedge-shaped, very minutely decussately striated, posteriorly strongly concentrically ridged, with the interstices cancellated; whitish, rayed at the umboes with livid purple; anterior side rounded, posterior very short, scarcely angled.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. Indian Seas.

Allied in general plan of sculpture to the preceding

PECTEN.—PLATE I.

Species 5. (Mus. Cuming.)

PECTEN LATIAURITUS. *Pect. testā subæquivalvi, obliquè subquadrata, inequilaterali, tenui, pellucido-cornea, pallidè ferrugineo-fuscescente, maculis angulatis albis plus minus variegata, concentricè sulcato-striata, costis obtusè rotundatis subirregularibus ad duodecim obliquè radiata.*

THE BROAD-EARED PECTEN. Shell nearly equivalve, obliquely subquadrate, inequilateral, thin, transparent-horny, pale rust-brown, more or less variegated with white angular spots, concentrically groove-striated, obliquely rayed with about twelve somewhat irregular obtusely rounded ribs.

CONRAD, Sowerby, Thesaurus Conch. vol. i. p. 57.

Hab. California.

Of a peculiar thin horny substance, rayed in an oblique direction with about a dozen incompletely developed ribs, mottled with white upon a rust-tinged or bronze ground.

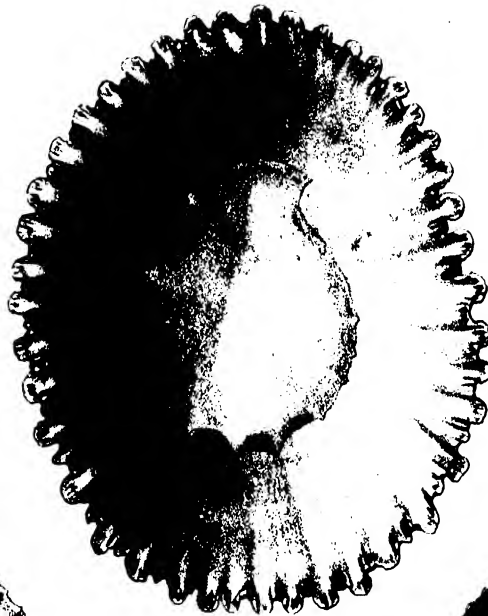
Species 6. (Fig. 2 b, Mus. Cuming.)

PECTEN LEUCOPHÆUS. *Pect. testā suborbiculari, æquivalvi, æquilaterali, auriculis subæqualibus; valvis convexis, costis octodecim subangulatis, striis elevatis ex interstitiis nitidè concentricè decussatis radiatis, costis valvæ dextræ latioribus, plus minus lævigatioribus; cinereo-grisea, immaculata, intus aut alba aut fusca.*

THE GREY PECTEN. Shell nearly orbicular, equivalve, equilateral, ears nearly equal; valves convex, rayed with eighteen sub-angled ribs, neatly concentrically decussated with raised striæ out of the interstices, ribs of the right valve broader and more or less smoother; ash-grey, unspotted, brown or white within.

Hab.

Of an uniform grey-slate colour without, and more or less tinged with a light bronze-brown within.



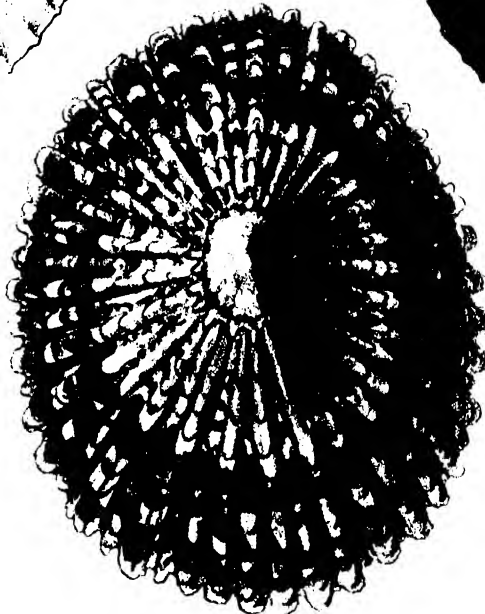
17a



17a



15b



14b

PATELLA.

PLATE VIII.

Species 14. (Fig. a, b, Mus. Cuming.)

PATELLA COSTOSO-PLICATA. *Pat. testā ovalā, convexiusculā, crassiusculā, radiatim fortiter costatā, costis irregularibus, rudē declivi-tuberculatis, interstitiis rudē clathratis; sordidē eroso-fuscā, intus albā, margine fimbriatā.*

THE RIB-PLEATED LIMPET. Shell ovate, slightly convex, rather thick, radiately strongly ribbed, ribs irregular, rudely slantingly tuberculated, interstices rudely latticed; dingy eroded brown, interior white, fimbriated at the margin.

MARTINI, Conch. Cab. vol. i. p. 91. pl. 8. f. 66.

Patella ferruginea, Gmelin.

Hab. — ?

A solid white shell, rayed with strong slantingly tubercled ribs rudely latticed in the interstices, the whole surface having a rusty eroded aspect.

Species 15. (Fig. a, b, Mus. Cuming.)

PATELLA CUPREA. *Pat. testā ovalā, semiglobosā, solidiusculā, radiatim crenulato-liratā, liris alternis minoribus; cupreo-fuscā, intus argentēā, nucleo opaco-albo.*

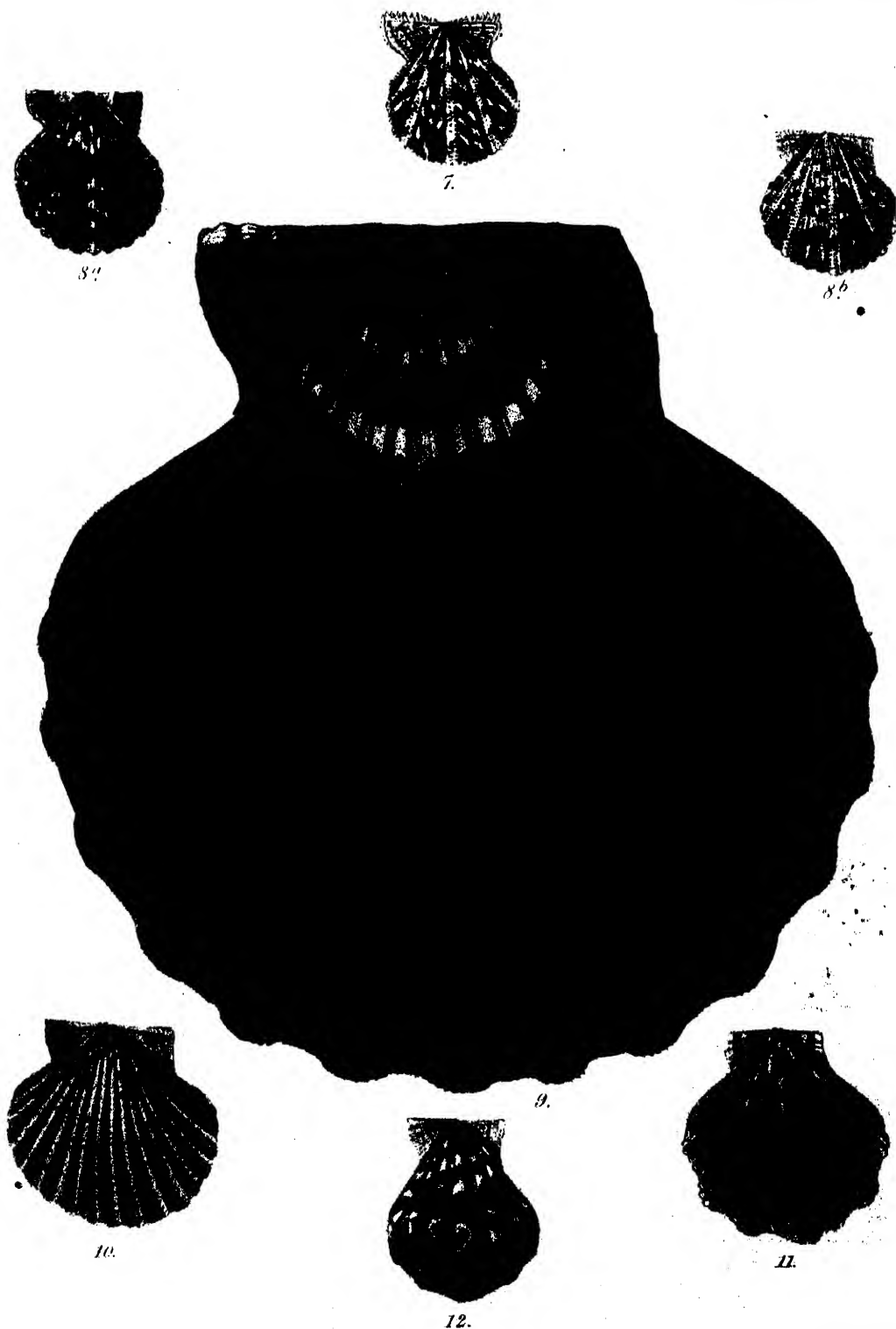
THE COPPER LIMPET. Shell ovate, semiglobose, rather solid, radiately crenulately ridged, alternate ridges smaller; copper-brown, interior silvery, nucleus opaque-white.

Patella lugubris, Dunker (not of Martyn or Martini).

Hab. Swan River.

A firm shell, of a semiglobose saucer-like form, rayed with crenuled ridges, alternately smaller, the exterior being of a semitransparent copper-brown white, the interior is bright silvery.

October, 1854.



PECTEN.

PLATE II.

Species 7. (Fig. 7 and 8. *a, b*, Mus. Cuming.)

PECTEN EXASPERATUS. *Pect. testā subæquivalvi, auriculis grandibus, conspicuè scabrosis, sinistris supernè acutè squamatis; valvâ sinistrâ convexâ, costis octodecim profusè serrato-scabrosis radiatâ, interstitiis scabrosis, fulvâ, olivaceo maculatâ, niveo-albo apersâ, costis quinque albicantioribus, squamis centralibus majoribus; valvâ dextrâ subplaniore, costis septemdecim, profusè serrato-squamatis, omnibus similibus, pallidiorè, olivaceo niveoque apersâ, lateribus acutè squamatis.*

THE SHARPENED PECTEN. Shell nearly equivalve, ears large, conspicuously scabrous, left ears sharply scaled along the tip; left valve convex, rayed with eighteen profusely serrately scabrous ribs, interstices scabrous, fulvous, spotted with olive and sprinkled with snowy white, five of the ribs whiter, with the central scales larger; right valve rather flatter, with seventeen profusely serrately scabrous ribs, all alike, paler, sprinkled with olive and snowy white, sides sharply scaled.

SOWERBY, Thesaurus Conch. vol. i. p. 54. pl. 18. f. 183-186.

Hab. Island of St. John, West Indies.

Mr. Sowerby has erred in quoting the Mediterranean as the habitat of this very characteristic species.

Species 9. (Mus. Cuming.)

PECTEN MAGNIFICUS. *Pect. testâ subæquivalvi, æquilaterali, auriculis inæqualibus, radiatim liratâ, liris auricularum anticarum paucioribus et majoribus; valvis costis tredecim ad quatuordecim, rotundatis, obsolete nodosis, radiatis, costis interstitiisque longitudinaliter sulcatis, sulcis transversim minutissimè arcuatim striatis; intus intensè corallio-rubrà, intus albâ, purpureo-marginatâ.*

THE MAGNIFICENT PECTEN. Shell nearly equivalve, equilateral, ears unequal, radiately ridged, ridges of the front ears fewer and larger; valves rayed with thirteen to fourteen rounded, obsolete nodose ridges, ribs and interstices longitudinally grooved, grooves transversely very minutely arcuately striated; deep coral-red without, white and purple-edged within.

SOWERBY, Pro. Zool. Soc. 1835, p. 109.

Hab. Isle of Plata, West Columbia (in coral sand at a depth of from six to seventeen fathoms); Cuming.

This fine species is not very remotely allied to *P. coral-linoides*, although of so very much larger size.

Species 10. (Mus. Cuming.)

PECTEN ASPER. *Pect. testâ inæquivalvi, æquilaterali, auriculis æqualibus, minutè serrato-striatis; valvâ sinistrâ planâ, umbones versus paululum elevatâ, costis octodecim subplano-biangulatis radiatâ, costis interstitiisque concentricè striatis, pallidè rufescente ubique punctulatâ; valvâ dextrâ convexâ, costis novemdecim sublævigatis radiatâ, costis albis, rufescente sparsim lineatis, interstitiis marginem versus rufescentibus.*

THE ROUGH PECTEN. Shell inequivalve, equilateral, ears equal, minutely serrately striated; left valve flat, a little raised towards the umbones, rayed with eighteen rather flatly two-angled ribs, ribs and interstices concentrically striated, dotted everywhere with pale red; right valve convex, rayed with nineteen rather smooth ribs, ribs white, sparingly lineated with red, interstices red towards the margin.

SOWERBY, Thesaurus Conch. vol. i. p. 50.

Pecten tricarinatus? Anton.

Hab. New Guinea; Hinds.

It is a peculiarity in this species, that there is less colouring on the ribs than in the interstices.

Species 11. (Mus. Cuming.)

PECTEN STELLATUS. *Pect. testâ subæquivalvi, tenuiculâ, subcompressâ, paululum altiore quam longâ, auriculis parvisculis, subæqualibus; valvâ sinistrâ costis sex-radiatâ, interstitiisque longitudinaliter liris et tenuistriatis, rufescente, punctis angulatis albis apersâ; valvâ dextrâ costis latioribus subrudibus septem-radiatâ, costis interstitiisque liris, albâ, umbonem versus albi-punctato-rufescente.*

THE STARRY PECTEN. Shell nearly equivalve, rather thin and compressed, a little higher than long, ears rather small, nearly equal; left valve rayed with six ribs, ribs and interstices longitudinally ridged and finely striated, light red, sprinkled with white angular



dots; right valve rayed with seven broader and rather rude ribs, ribs and interstices ridged, white, stained with white-dotted red towards the umbo.

Hab. —?

Distinguished from *P. Danicus*, to which it is nearly allied, by its conspicuous sculpture of ribs and ridges.

Species 12. (Mus. Cuming.)

PECTEN VELUTINUS. *Pect. testā subæquivalvi, compressā, altiore quam longā, æquilaterali, radiatim lirato-striatā, auriculis subæqualibus; valvā sinistrā costis quinque elevatiusculis rotundatis subangustis radiatā, interstitiis latis, fulvo-rufescente, albo promiscuè stri-*

gatā et punctulatā; valvā dextrā costis sex latis, interstitiis angustis, albā.

THE VELVET PECTEN. Shell nearly equivalve, compressed, higher than long, equilateral, radiately ridge-like striated, ears nearly equal; left valve rayed with five raised rounded rather narrow ribs, with the interstices broad, fulvous-red, promiscuously streaked and dotted with white; right valve with six broad ribs and the interstices narrow, white.

SOWERRY, Thesaurus Conch. vol. i. p. 63. pl. 13. f. 31.

Hab. Macassar, Island of Celebes; Hinds.

A delicately formed species, partaking of the character of *P. sulpicatus*. o

PATELLA.

PLATE XXXVI.

Species 110. (Mus. Cuming.)

PATELLA LENTIGINOSA. *Pat. testā ovatā, convexā, apice anticē inclinato, obtuso, radiatim striatā, striis plus minus erosis; albidā, nigro-castaneo interruptē radiatā et promiscuē undato-lentiginosā, intus cærulescente-albā.*

THE FRECKLED LIMPET. Shell ovate, convex, apex inclined anteriorly, obtuse, radiately striated, striae more or less eroded; whitish, interruptedly rayed and promiscuously wave-freckled with blackish-chestnut, interior bluish-white.

Hab. — ?

This species is particularly well characterized by the promiscuous wave-freckled style of its dark chestnut painting.

Species 111. (Mus. Cuming.)

PATELLA ARANEOSA. *Pat. testā suboblongo-ovatā, anticē attenuatā, lenticulā, lateraliter compressā, apice subacutē acuminato, antico, radiatim densē striatā, striis funiculatis, striis concentricis minutē crenulatis; olivaceo-viridi, lineis opaco-albis numerosis conspicuē radiatā, intus semipellucidā.*

THE SPIDER LIMPET. Shell suboblong-ovate, attenuated in front, rather thin, compressed at the sides, apex rather sharply acuminate, anterior, radiately densely striated, striae corded, minutely crenulated with concentric striae; olive-green, conspicuously rayed with numerous opaque-white lines, interior semitransparent.

Hab. Australia.

A somewhat depressed species, pinched and sharply pointed towards the apex, which inclines very much to the front, and of a dull greenish-olive colour, curiously rayed throughout with fine opaque-white lines.

Species 112. (Mus. Cuming.)

PATELLA OREGONA. *Pat. testā globoso-conoidē, apice antico, acutē acuminato, uncinato, radiatim obtusē costatā, costis nodatis, subcorrugatis; nigrā, punctis albis numerosis, interdum nigro et albo strigatā, intus cærulescente-albā, medio intensē castaneā.*

THE OREGON LIMPET. Shell globosely conoid, apex anterior, sharply acuminate, hooked, radiately ob-

tusely ribbed, ribs noded, slightly wrinkled; black, marked with numerous white punctures, streaked with black and white, interior bluish-white, deep chestnut in the middle.

NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Mouth of the Oregon River, Upper California.

Of the same peculiar type as *P. umbonata* of the preceding Plate, and possibly only a variety of that species. It is rayed with more prominent swollen ribs, and is more sharply acuminate and hooked at the apex.

Species 113. (Mus. Cuming.)

PATELLA BORNEENSIS. *Pat. testā rotundato-ovatā, subdepressā, apice subcentrali, obtuso, radiatim obscurē striatā, striis plus minus erosis; atrā, radiis irregularibus albis nigro-interruptis ornatā, intus cærulescente, medio pallidē castaneā, margine nigro, lato.*

THE BORNEO LIMPET. Shell rotundately ovate, rather depressed, apex nearly central, obtuse, radiately obscurely striated, striae more or less eroded; black, ornamented with irregular black interrupted white rays, interior bluish, light chestnut in the middle, margin black, broad.

Hab. North coast of Borneo.

A depressed, rudely formed species, dull black, irregularly rayed with white rays interrupted with black, the interior being of a blue tinge, with an unusually broad black border.

Species 114. (Mus. Cuming.)

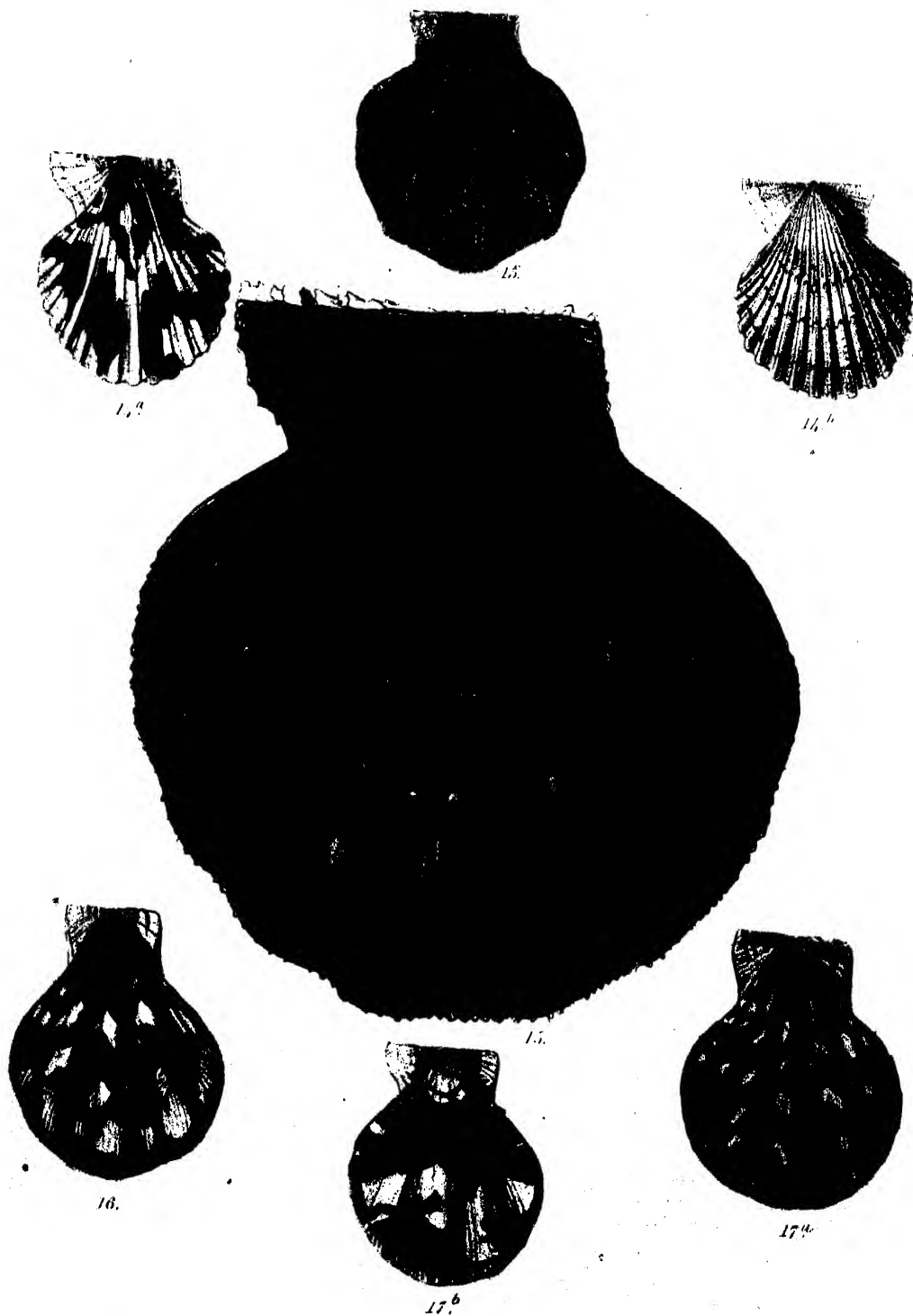
PATELLA STELLARIS. *Pat. testā subdepresso-ovatā, apice centrali, costis septem peramplis tumidis radiatis, ad marginem prolongatis, interstitiis lirā angustā brevi; sordidē albā, intus albā, medio pallidē castaneo-rufā.*

THE STAR LIMPET. Shell subdepressly ovate, apex central, with seven large swollen radiating ribs, prolonged over the margin, interstices with a short narrow ridge; dull white, interior white, pale chestnut-red in the middle.

Patelloida stellaris, Quoy and Gaimard, Moll. Voy. de l'Astrolabe, vol. iii. p. 356. pl. 71. f. 1-4.

Hab. New Holland.

Distinguished from all other species of the genus, by its peculiarly swollen stellar radiating ribs.





PECTEN.

PLATE III.

Species 13. (Mus. Cuming.)

PECTEN DANICUS. *Pect. testâ suborbiculari, inæquivalvi, tenui, subcompressâ, auriculis subæqualibus, striatis; valvâ sinistrâ plano-convexâ, costis quinque ad sex vis elevatis latiusculis leviter angulatis radiatâ, costis tenuiliratis, interstitiisque undique tenuissimè decussatim striatis, fulvo-rufâ, punctis pallidis promiscuè densè asperâ; valvâ dextrâ convexiore, costis sex depresso-convexis latioribus, lateribus subrugoso-liratis, albâ, ad umbonem rufescente.*

THE DANISH PECTEN. Shell nearly orbicular, inequivalve, thin, somewhat compressed, ears nearly equal, striated; left valve flatly convex, rayed with five to six ribs but little raised, rather broad, slightly angled, finely ridged, and, with the interstices, everywhere very finely decussately striated, fulvous red, promiscuously densely sprinkled with pale dots; right valve more convex, with six depressly convex broader ribs, sides somewhat roughly ridged, white, tinged with red at the umbo.

CHEMNITZ, Conch. Cab. vol. xi. p. 265. pl. 207. f. 2043.

Pecten aspersus, Lamarck (not of Sowerby).

Ostrea triradiata, Müller.

Ostrea hybrida, Dillwyn.

Pecten pseudamusium, Chemnitz (not of Klein).

Ostrea septemradiata, Gmelin.

Pecten glaber, Montagu.

Pecten nebulosus, Brown.

Pecten Jamesonii, Smith.

Hab. Hebrides, Zetland, Scandinavia.

Extremely variable in form and sculpture, but less variable in colour and marking than many other species of this genus.

Species 14. (Fig. a and b, Mus. Cuming.)

PECTEN TRANQUEBARICUS. *Pect. testâ trigono-orbiculari, æquivalvi, æquilaterali, auriculis valde inæqualibus; valvis convexiusculis, costis octodecim levibus elevatis subquadratis, lateribus minutè serratis, radiatâ, interstitiis subprofundè excavatis; colore variâ, albâ, nunc castaneo marmoratâ, nunc aurantio-rufescente tinctâ.*

THE TRANQUEBAR PECTEN. Shell triangularly orbicular, equivalve, equilateral, ears very unequal; valves rather convex, rayed with eighteen smooth raised somewhat square ribs, minutely serrated at the sides, interstices

rather deeply excavated; colour various, white, now marbled with chestnut, now tinged with orange-red.

Ostrea Tranquebarica, Gmelin, Syst. Nat. p. 3328.

Pecten Tranquebaricus, Lamarck.

Ostrea undulata, Born.

Ostrea nucleus, Dillwyn (not of Born).

Hab. Tranquebar.

Of an elegant symmetrical growth, extremely variable in colour.

Species 15. (Mus. Cuming.)

PECTEN NODOSUS. *Pect. testâ subæquivalvi, æquilaterali, auriculis inæqualibus; valvis subplano-convexis, costis novem ampliter nodosis radiatis, costis interstitiisque undique nodoso-liratis, costis valvæ dextræ planioribus, latioribus, viz nodosis; valvâ sinistrâ intensè brunneo-rubrà, dextrâ pallidiore.*

THE KNOBBED PECTEN. Shell nearly equivalve, equilateral, ears unequal; valves rather flatly convex, rayed with nine largely knobbed ribs, ribs and interstices nodosely ridged throughout, ribs of the right valve flatter, broader, scarcely nodose; left valve deep brown-red, right valve paler.

Ostrea nodosa, Linnaeus, Syst. Nat. p. 1145.

Pecten nodosus, Lamarck.

Ostrea decemradiata, Gmelin.

Pecten corallinus, Chemnitz.

Hab. Gulf of Mexico.

This fine and well-known species varies from a rich brown-red to a deep coral-red colour.

Species 16. (Mus. Cuming.)

PECTEN FLICA. *Pect. testâ trigono-ovatâ, subæquivalvi, æquilaterali, lateribus versus umbones compressis, auriculis parvisculis, æqualibus; valvis undique striatis, costis tribus ad quinque radiatis, costis valvæ sinistræ rotundatis, elevatis, prope marginem declivibus, valvæ dextræ latioribus, convexis, minus elevatis; valvâ sinistrâ fulvescente-albâ, castaneo-rufa latè marmoratâ, dextrâ albâ, immaculatâ.*

THE FOLD PECTEN. Shell triangularly ovate, nearly equivalve, equilateral, sides compressed towards the umboes, ears rather small, equal; valves striated throughout, rayed with three to five ribs, ribs of the



116a



115a



116b



117b



117a



118a



117b



119a



119b



118b

left valve rounded, raised, slanting down near the margin of the right valve, broader, convex, less raised; left valve fulvous-white, broadly marbled with chestnut-red, right valve white, unspotted.

Ostrea plica, Linnæus, Syst. Nat. p. 1145.

Pecten plica, Lamarck.

Hab. China, Ceylon.

Curiously distinguished by a kind of supplementary growth next the margin, in which the ribs are almost obsolete.

Species 17. (Fig. *a, b*, Mus. Cuming.)

PECTEN SUBPLICATUS. *Pect. testâ subtrigono-ovatâ, subæquivalvi, æquilaterali, compressâ, lateribus versus umbones subcompressis, auriculis æqualibus; valvis undique striatis, costis tribus aut quinque radiatis, costis subelevatis, prope marginem declivibus, valvæ dextræ*

latioribus; valvâ sinistrâ albo castaneoque variegatâ, versus umbones violascentibus, dextrâ albâ, castaneo interdum pallidè tinctâ.

THE SUBPLICATE PECTEN. Shell somewhat triangularly ovate, nearly equivalve, equilateral, compressed, sides a little compressed towards the umboes, ears equal; valves striated throughout, rayed with three to five ribs, ribs somewhat raised, slanting near the margin, of the right valve broader; left valve variegated with white and chestnut, violet towards the umboes, right valve white, sometimes faintly-tinged with chestnut.

SOWERBY, Thesaurus Conch. vol. i. p. 64. pl. 13. f. 37, and pl. 14. f. 72, 73, 81.

Hab. Island of Corrigidor, Bay of Manila (in coarse sand at the depth of seven fathoms); Cuming.

This appears to be little more than a variety of the preceding species, thinner and more compressed. The detail of character is the same throughout.

PATELLA.

PLATE XXXVII.

Species 115. (Fig. 115 a, b, and 118 a, b, Mus. Cuming.)

PATELLA ELEGANS. *Pat. testā ovatā vel subquadrato-rotundatā, depressiusculā, apice subcentrali, radiatim tenuiliratā et sulcatā; carneo-albidā, radiis spadiceis et nigris irregularibus, sæpè furcatis, circa apicem obscure albo marmoratis ornata, intus lacteā, medio palidè fuscescente, margine conspicuè nigro tessellato.*

THE ELEGANT LIMPET. Shell ovate or somewhat squarely rotundate, rather depressed, apex subcentral, radiately finely ridged and grooved; flesh-white, ornamented with irregular bay and black rays, often forked, obscurely mottled around the apex with white, interior milk-white, pale brown in the middle, margin conspicuously tessellated with black.

PHILIPPI, Abbild. und Besch. Conch. *Patella*, pl. 2. f. 2.

Acmaea elegans, Philippi.

Hab. La Guayra.

The specimens represented at Fig. 115 and 118 of this Plate prove, on minute examination, to be different forms of the same species. The dark pencilled rays are peculiarly broken up and white-mottled about the apex, and conspicuously neatly tessellated on the inner margin.

Species 116. (Mus. Cuming.)

PATELLA CIMELIATA. *Pat. testā ovatā, subconicā, apice centrali, elevato, radiatim costatā, costis angustis, subdistantibus, interstitiis obscure clathratis; lutescente-albā, costis opaco-albis, interstitiis promiscuè sanguineo-linctis, intus opaco-albā.*

THE JEWELLED LIMPET. Shell ovate, subconical, apex central, raised, radiately ribbed, ribs narrow, rather distant, interstices obscurely latticed; yellowish-white, ribs opaque-white, interstices promiscuously blood-stained, interior opaque-white.

Hab. Honduras; Dyson.

A very characteristic blood-red stained shell, the surface being obscurely latticed between radiating opaque-white ribs.

Species 117. (Mus. Cuming.)

PATELLA STIPULATA. *Pat. testā suboblongo-ovatā, anticè subacuminatā, depresso-converā, apice centrali, subacuto, radiatim liratā, liris rudibus, confertis, valdè irregularibus, subundulatis, margine subacutè productis; tirescente-nigrā, lineis perpancicis albidis obscure radiatā, intus intensè cæruleo-ciridi, margine nigricante.*

THE THATCHED LIMPET. Shell suboblong-ovate, a little acuminate in front, depressly convex, apex central, rather sharp, radiately ridged, ridges rude, close-set, very irregular, a little waved, rather sharply produced at the margin; greenish-black, faintly rayed with a few whitish lines, interior deep blue-green, margin blackish.

Hab. Panama.

A dark closely irregularly wave-ridged shell, the ridges here and there produced over the margin. The interior is of a peculiar deep blue-green.

Species 119. (Mus. Cuming.)

PATELLA SCABRA. *Pat. testā ovatā, anticè subattenuatā, depresso-conoidē, undique creberrimè scabroso-costatā et liratā, apice subanlico, acuto, paululum uncinato; lutescente-albā, ferrugineo-fusco undique densè tessellatā, intus albā.*

THE ROUGH LIMPET. Shell ovate, a little attenuated in front, depressly conoid, everywhere closely scabrously ribbed and ridged, apex subanterior, sharp, a little hooked; yellowish-white, densely tessellated throughout with rust-brown, interior white.

NUTTALL, Jay's Catalogue of Shells.

Hab. Upper California.

A very characteristic species, both in sculpture and colouring, sometimes of much larger size than the specimen here figured, with the character, however, in that case more or less obscured by abrasion.



19^a



18.



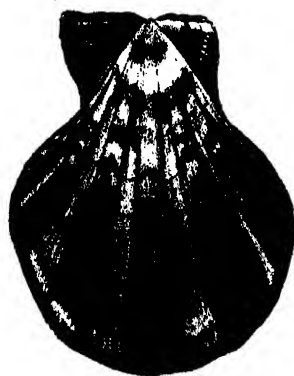
19^b



20.



21^a



22.



21^b



PECTEN.

PLATE IV.

Species 18. (Mus. Cuming.)

PECTEN CLAVATUS. *Pect. testā trigono-orbiculari, inequivalvi, æquilaterali, auriculis parvis, inequalibus; valvis tenuibus, minutè granuloso-striatis, sinistrā concavo-depressā, costis quinque tumidiusculis subacutis radiatā, prope marginem inflatis, aurantio-rufescente, punctis pallidis densè lentiginosā; valvā dextrā convexā, costis quinque latioribus inflatis, albā.*

THE STUDDED PECTEN. Shell triangularly orbicular, inequivalve, equilateral, ears small, unequal; valves thin, minutely granulated striated; left valve concavely depressed, rayed with five rather sharp swollen ribs, inflated near the margin, orange-red, densely freckled with light dots; right valve convex, with five broader inflated ribs, white.

POLI, Test. utr. Sicil. pl. 1. f. 17.

Eadem var., *Pecten inflexus*, Poli.

Pecten Dumasii, Payraudeau.

Hab. Sicily.

Very closely allied to *P. Danicus*, and probably only a variety of that species.

Species 19. (Fig. a, b, Mus. Cuming.)

PECTEN IRREGULARIS. *Pect. testā obliquè ovalē, tenuiculā, subæquivalvi; valvā dextrā convexiore, subirregulari, auriculis valde inequalibus, posticis parvis, brevibus; valvis costis parvis numerosis, vix scabrosis, radiatis; colore variā, nunc viciè miniaceā, nunc purpureo-violaceā, albo maculatā et obscurè radiatā, albo interdum fusco-punctato.*

THE IRREGULAR PECTEN. Shell obliquely ovate, rather thin, nearly equivalve; right valve more convex, rather irregular, ears very unequal, the posterior small, short; valves rayed with numerous small slightly scabrous ribs; colour various, now bright vermillion, now purple-violet, blotched and obscurely rayed with white, the white being sometimes dotted with brown.

SOWERBY, Thesaurus Conch. p. 69. pl. 13. f. 51-2.

Hab. Eastern Seas.

An extremely interesting species, bearing some general resemblance to *P. pusio*.

Species 20. (Mus. Cuming.)

PECTEN SUBNODOSUS. *Pect. testā subæquivalvi, æquilaterali, auriculis inequalibus; valvis liris angustis numerosissimis radiatis; valvā sinistrā costis decem hic illic nodosis, dextrā costis undecim levibus radiatā; purpureo-brunnē, rufo tinctā, lineis albis brevibus undatis concentricè notatā.*

THE SUBNODOSE PECTEN. Shell nearly equivalve, equilateral, ears unequal; valves rayed with very numerous narrow ridges; left valve rayed with ten ribs, here and there nodose; right valve with eleven ribs, smooth; purple-brown, tinged with red, concentrically marked with waved white lines.

SOWERBY, Pro. Zool. Soc. 1835, p. 109.

Hab. Mexico and West Columbia (in sandy mud and coral sand, at a depth of from ten to seventeen fathoms); Cuming.

Most readily distinguished at first sight from *P. nodosus* by its concentric white-waved marking.

Species 21. (Fig. a, b, Mus. Cuming.)

PECTEN FLABELLOIDES. *Pect. testā suborbiculari, ad latera prope umbones compressā, æquivalvi, æquilaterali, auriculis subæqualibus; valvis medio convexis, versus marginem compressis et fortiter radialim tenuilatis, costis octo ad novem rotundatis subelevatis radiatis; albā aut lutescente, castaneo vel purpureo-nigro plus minus marmoratā.*

THE FAN-LIKE PECTEN. Shell nearly orbicular, compressed at the sides near the umbones, equivalve, equilateral, ears nearly equal; valves convex in the middle, compressed and strongly finely radiately ridged towards the margin, rayed with eight to nine rather elevated rounded ribs; white or yellowish, more or less marbled with chestnut and purple-black.

Hab. Moluccas.

A strongly formed species of very regular and symmetric growth, compressed a little at the sides, after the manner of *P. plioa*, but, unlike that species, expanded flatly out towards the margin into the shape of a fan.



121a



120a



121b



120b



122a



122b



123a



124a



124b



125b

Species 22. (Mus. Cuming.)

PECTEN STRANGEI. *Pect. testā subtrigono-ovalā, æqui-valvi, plano-compressā, æquilaterali, auriculis inæqualibus; valvis versus marginem tenuiliratis, costis quinqueradiatis, quarum tribus centralibus latiusculis plano-convexis, distantibus; valvā sinistrā lutescente-albā, costis livido-fuscescentibus; valvā dextrā lutescente-albā, immaculatā, auriculis violascentibus, lateribus purpureo-roseo strigatis.*

STRANGE'S PECTEN. Shell somewhat triangularly ovate,

equivalve, flatly compressed, equilateral, ears unequal; valves finely ridged towards the margin, rayed with five ribs, of which the three central are rather broad, flatly convex, and distant; left valve yellowish-white, ribs livid-brown; right valve yellowish-white, unspotted, ears violet-tinged, sides streaked with purple-rose.

Hab. Moreton Bay, Australia.

A very characteristic species, flatly compressed, broadly and sparingly ribbed, and strikingly coloured.

PATELLA.

PLATE XXXVIII.

Species 120. (Mus. Cuming.)

PATELLA LACUNOSA. *Pat. testā oblongo-ovatā, subelevatō-conoideā, apice subcentrali, obtuso, radiatim costatā, costis tumidiusculis, obtusis, interstitiis subexcaratis, fortiter striatis; fuscescente-albidā, costis albis, intus pellucido-albā.*

THE GUTTERED LIMPET. Shell oblong-ovate, rather elevatedly conoid, apex nearly central, obtuse, radiately ribbed, ribs rather swollen, obtuse, interstices rather excavated, strongly striated; brownish-white, ribs white, interior transparent-white.

Hab. — ?

Chiefly distinguished by its oblong-oval form and prominent radiating ribs, which are somewhat swollen and worn.

Species 121. (Mus. Cuming.)

PATELLA FENESTRATA. *Pat. testā ovalā, anticē subatenuatā, tenniculā, depresso-conoideā, apice prominente, subobtusō, radiatim densē tenuistriatā, striis subundulatis; virescente, cinereo-olivaceo undique tenuissimē tessellato-maculatā, intus cærulescente-cinereā, margine lato, nigro.*

THE WINDOWED LIMPET. Shell ovate, a little attenuated in front, rather thin, depressly conoid, apex prominent, rather obtuse, radiately densely finely striated, striae a little waved; greenish, finely tessellately mottled with ash-olive, interior bluish-ash, with a broad black border.

NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Upper California.

The colouring of this species is peculiar, the outer surface being densely mottled with a very fine network of ash-olive upon a greenish ground, whilst the interior is characterized by a broad black border.

Species 122. (Mus. Cuming.)

PATELLA PUNCTURATA. *Pat. testā subquadrato-ovalā, apice centrali, subobtusō, radiatim costatā, costis irregularibus, nunc distinctis, nunc subobscuris, liris concentricis fere obsolete cancellatis, super costis squamato-pustulatis; opaco-albā, punctis sanguineis paucis promiscuē aspersā, intus opaco-albā.*

THE ROSE-DOTTED LIMPET. Shell somewhat squarely

ovate, apex central, rather obtuse, radiately ribbed, ribs irregular, sometimes distinct, sometimes rather obscure, cancellated with nearly obsolete concentric ridges, squamately pustuled on the ribs; opake-white, promiscuously sprinkled with a few blood-red dots, interior opake-white.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vii. p. 537. *Hab.* Honduras; Dyson.

This appears to be the species imperfectly described by Lamarck under the above name from Barbadoes. Its chief characteristic is the sprinkling of blood-rose dots upon an opake-white ground, and squamately pustuled ribs, which are more or less worn.

Species 123. (Mus. Cuming.)

PATELLA ACHATES. *Pat. testā ovalā, tenniculā, convexo-depressā, radiatim densē striatā, striis hic illic tenuē funiculatis; intensē nigrā, radiis albis fulguratis irregulariter variegatā, intus cærulescente, margine latē nigro-variegato.*

THE AGATE LIMPET. Shell ovate, rather thin, convexly depressed, radiately densely striated, striae here and there finely corded; intense black, irregularly variegated with lightning-marked white rays, interior bluish, with a broad black variegated border.

Hab. — ?

A strikingly characteristic species in respect of painting, densely rayed with fine corded striae.

Species 124. (Mus. Cuming.)

PATELLA DUNKERI. *Pat. testā ovalā, conoideā, lateraliter subcompressā, apice anticē inclinato, subuncinato, tenniculā, subpellucidā, radiatim densē elevato-striatā, interstitiis minutissimē cancellatis; cinereo-corneā, pallidē radiatā.*

DUNKER'S LIMPET. Shell ovate, conoid, a little compressed at the sides, apex inclined anteriorly, slightly hooked, rather thin, subpellucid, radiately densely elevatedly striated, interstices very minutely cancellated; ash-horny, faintly rayed.

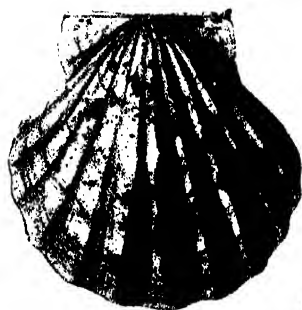
KRAUSS, Südafric. Moll. p. 55. pl. 3. f. 14.

Hab. Port Natal.

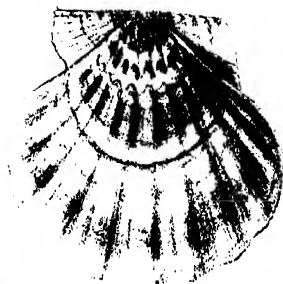
A delicately rayed ash-horny subtransparent shell, elaborately sculptured with raised striae, the interstices between which are very minutely cancellated.



23



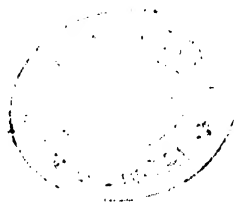
24 a.



24 b.



25.



PECTEN.

PLATE V.

Species 23. (Mus. Saul.)

PECTEN SERICEUS. *Pect. testâ orbiculari, inæquivalvi; valvâ sinistrâ planâ, dextrâ convexâ, æquilaterali, sub lente tenuissimè et creberrimè concentricè striatâ, costis viginti medio angulatis subdistantibus nitidè radiatâ; rufescente-spadiceâ, umbones versus roseo tinctâ, valvâ dextrâ pallidiore; auriculis æqualibus, planulatis, eliratis.*

THE SILKY PECTEN. Shell orbicular, inequivalve; left valve flat; right valve convex, equilateral, very broadly and closely concentrically striated, neatly rayed with twenty rather distant middle-angled ribs; reddish fawn-colour, tinged with rose towards the umboes, right valve paler; ears equal, flattened, not ridged.

HINDS, Moll. Voy. Sulphur, p. 60. pl. 17. f. 1.

Hab. Bay of Panama (on a muddy floor at the depth of fifty-three fathoms); Belcher.

Distinguished by its beautifully symmetrical form and sharply angled ribs, which towards the umboes are delicately minutely painted with lake-rose. The only specimen known.

Species 24. (Fig. a, b, Mus. Cuming.)

PECTEN UNICOLOR. *Pect. testâ suborbiculari, inæquivalvi; valvâ sinistrâ convexâ, dextrâ subplanulatâ, æquilaterali, costis novem ad decem convexis parum elevatis radiatâ, interstitiis radiatim striatis et leviter sulcatis; rufo-aurantiâ, vel albâ purpureo-lacco aut fuscescente tinctâ; auriculis valvæ sinistræ fere æqualibus, dextræ inæqualibus, anticâ subtus emarginatâ et quadridenticulatâ.*

THE ONE-COLOURED PECTEN. Shell nearly orbicular, inequivalve; left valve convex; right valve rather flattened, equilateral, rayed with nine or ten convex

slightly raised ribs, interstices radiately striated and lightly grooved; red-orange, or white tinged with purple-lake or light brown; ears of the left valve nearly equal, of the right valve unequal, the front one being emarginated at the lower part, and four-denticled.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 138.

Pecten aurantius, Sowerby.

Hab. Mediterranean and Black Seas.

Varying extremely in colour, but constant in form and sculpture.

Species 25. (Mus. Cuming.)

PECTEN PURPURATUS. *Pect. testâ subovatâ, paulo longiore quam altâ, æquivalvi, æquilaterali, valvis crassiusculis, costis duabus et viginti convexo-planis utrinque serratis radiatis, interstitiis lirâ serratâ versus marginem ornatis; costis intensè purpureis, hic illic albo marmoratis, interstitiis purpureo-roseis; auriculis valvæ sinistræ æqualibus, dextræ inæqualibus, anticâ subtus emarginatâ, et subobscurè quadridenticulatâ.*

THE PURPLE-STAINED PECTEN. Shell subovate, a little longer than high, equivalve, equilateral, valves rather thick, rayed with two-and-twenty convexly flattened ribs, serrated on either side, interstices ornamented towards the margin with a serrated rib; ribs very dark purple, mottled here and there with white, interstices purple-lake; ears of the left valve equal, of the right valve unequal, the front one being emarginated below, and obscurely four-denticled.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 134.

Hab. Bay of Callao, Peru.

This fine and well-known species may be readily distinguished by its form and mottled purple colouring.



125a



126a



126b



127b



127a



127b



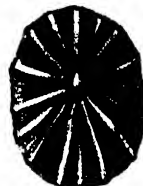
128a



129a



129b



128b

PATELLA.

PLATE XXXIX.

Species 125. (Mus. Cuming.)

PATELLA CUBENSIS. *Pat. testā rotundato-oratā, pyramidaliter conoidē, crassiusculā, apice subcentrali, elevato, radiatim lineariter-liratā et sulcatā, liris flexuosis, interruptis, furcatis; liris albis, sulcis nigris, intus albā, medio intus castaneā, margine nigro-lineato.*

THE CUBA LIMPET. Shell rotundately ovate, pyramidally conoid, rather thick, apex nearly central, raised, radiately linearly ridged and grooved, ridges flexuous, interrupted and forked; ridges white, grooves black, interior white, dark^o chestnut in the middle, border black, lined.

Hab. Cuba.

A solid, pyramidally conoid shell, peculiarly sculptured with promiscuously forked white ridges, the narrow interstices between which are black.

Species 126. (Mus. Cuming.)

PATELLA GRANO-STRIATA. *Pat. testā depresso-oratā, tenuiculā, anticē attenuatā, apice anticē multo inclinato, radiatim striatis, striis elevatis, tenuē funiculatis, subtilissimē granulatis; livido-nigricante.*

THE GRAIN-STRIATED LIMPET. Shell depressly ovate, rather thin, attenuated in front, apex much inclined anteriorly, radiately striated, striae raised, thinly corded, very finely granuled; livid black.

Hab. —?

A thin, very depressed, anteriorly inclined shell, of a livid black hue, delicately rayed with characteristic granulated striae.

Species 127. (Mus. Cuming.)

PATELLA JACKSONIENSIS. *Pat. testā suboblongo-oratā, subrudī, apice centrali, elevato, obsolete radiatim striatā, plus minus erosā; fusco alboque irregulariter radiatā, intus radiatā.*

THE PORT JACKSON LIMPET. Shell somewhat oblong-ovate, rather rude, apex central, raised, obsolete radiately striated, more or less eroded; irregularly rayed with brown and white, rayed in the interior.

Hab. Port Jackson, Australia.

Of a peculiarly rude oblong-ovate growth, variously rayed with brown and white.

Species 128. (Mus. Cuming.)

PATELLA ALBICOSTATA. *Pat. testā subquadrato-oratā, crassiusculā, rudī, depressā, apice centrali, radiatim rudē costatā, costis obtusis, distantibus, subirregularibus; costis albidis, interstitiis nigris, intus albā.*

THE WHITE-RIBBED LIMPET. Shell squarely ovate, rather thick, rude, depressed, apex central, radiately rudely ribbed, ribs obtuse, distant, rather irregular; ribs white, interstices black, interior white.

C. B. ADAMS, Contributions to Conchology.

Hab. Jamaica.

A very characteristic rudely depressed shell, starred with whitish rather distant ribs.

Species 129. (Mus. Cuming.)

PATELLA MIXTA. *Pat. testā ovalā, tenuiculā, conoidā, lateraliter compressā, apice subantico, obsolete decussatim striatā; nigro lateoque peculiariter marmoratā, intus variegatā.*

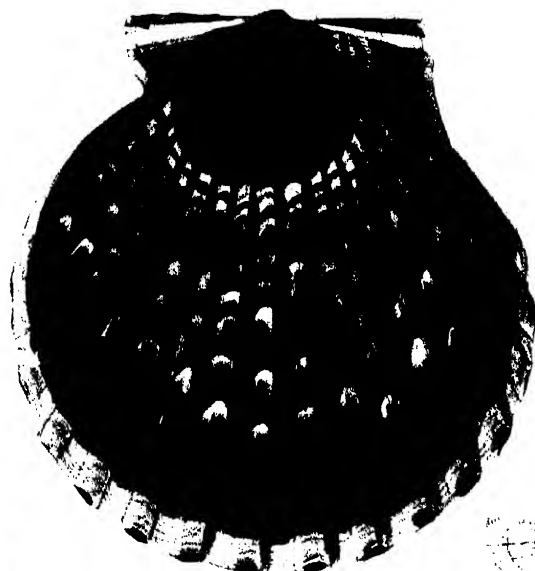
THE MOTTLED LIMPET. Shell ovate, rather thin, conoid, compressed at the sides, apex rather anterior, obsolete decussately striated; peculiarly mottled with black and yellow, variegated in the interior.

Hab. Port Phillip, Australia.

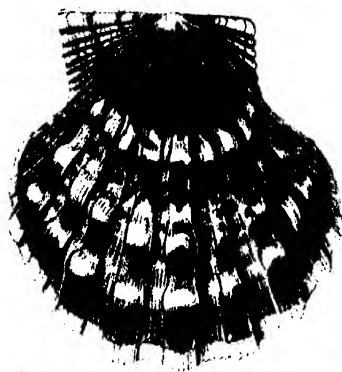
A thin, peculiar mottled shell, with somewhat the aspect of our northern *P. testudinalis*.

March, 1855.

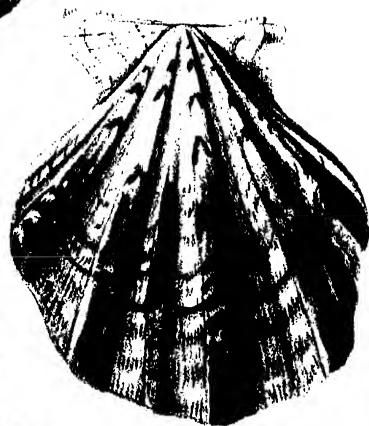




26.



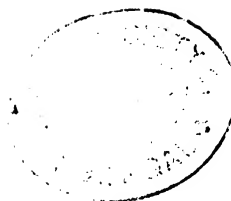
27.



28.



29.



PECTEN.

PLATE VI.

Species 26. (Mus. Cuming.)

PECTEN IRRADIANS. *Pect. testā subquadrato-orbiculari, inequivalvi; valvā sinistrā convexā, dextrā convexiore, æquilaterali, valvis concentricè creberrimè tenuistriatis, costis quindecim ad sexdecim convexis subelevatis radiatis; valvā sinistrā caruleo-nigrā aut fuscā, albo marmoratā, dextrā pallidiore, sæpe albā; auriculis subæqualibus, antice paululum emarginatis.*

THE BEAMING PECTEN. Shell somewhat squarely orbicular, inequivalve; left valve convex, right valve more convex, equilateral, valves concentrically very closely finely striated, rayed with fifteen to sixteen slightly raised convex ribs; left valve blue-black or brown, mottled with white, right valve paler, often white; ears nearly equal, the front ones a little emarginated.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 143.

Pecten turgidus, Sowerby (not of Lamarck).

Pecten concentricus, Say.

Hab. Mediterranean,

The bluish colouring of this species, which runs into the mottled white spaces, is characteristic.

Species 27. (Mus. Cuming.)

PECTEN CORALLINOIDES. *Pect. testā suborbiculari, æquivalvi, vix æquilaterali; valvis subventricosis, crassis, costis novem ad decem grandibus turgidis ampliter nodatis radiatis, costis interstitiisque radiatim serratoliratis, costis valvæ dextræ majoribus; r. albidā aut purpureo-fuscā, intensè corallio-rubro plus minus tinctā et punctatā, valvā dextrā pallidiore, sæpe albā; auriculis valde inequalibus.*

THE CORAL-LIKE PECTEN. Shell somewhat orbicular, equivalve, scarcely equilateral; valves subventricose, thick, rayed with nine to ten large, swollen, largely knobbed ribs, ribs and interstices radiately serrately ridged, ribs of the right valve larger; whitish or purple-brown, more or less stained and dotted with deep coral-red, right valve paler, often white; ears very unequal.

D'ORBIGNY, Moll. des Isles Canaries, p. 102.

Hab. Zanzibar.

Very closely allied to *Pecten nodosus*, but of much smaller size, and of a peculiar coral-red painting, stained

chiefly on the swollen knobs of the left valve. The specimen here figured is unusually large.

Species 28. (Mus. Cuming.)

PECTEN PES-ANATIS. *Pect. testā suborbiculari, tenuiculā, irregulari, æquilaterali, subæquivalvi; valvis radiatim elevato-striatis, costis quinque tumidiusculis distantibus radiatis; valvā sinistrā albūlā, fuscescēte tinctā et punctatā, costis lividis, dextrā albā; auriculis valvæ sinistræ subæqualibus, dextræ inequalibus.*

THE DUCK'S-FOOT PECTEN. Shell somewhat orbicular, rather thin, irregular, equilateral, nearly equivalve; valves radiately elevately striated, rayed with five, rather swollen, distant ribs; left valve whitish, stained and dotted with light brown, ribs livid, right valve white; ears of the left valve nearly equal, of the right valve unequal.

Hab. Moluccas.

A thin species, of curious irregular growth, rayed with five distant livid ribs, having sometimes a trace of an intermediate rib.

Species 29. (Mus. Cuming.)

PECTEN ZICZAC. *Pect. testā orbiculari, inequivalvi; valvā sinistrā concavo-planā, dextrā valde convexā, æquilaterali; valvā sinistrā concentricè tenuissimè striatis, radiatim sulcatis, sulcis ad triginti, irregularibus, dextrā sulcis ad viginti radiatis, sulcis linearibus, regularibus; rufo-purpureā, valvā sinistrā cinereo promiscuè radiatā, maculisque paucis albis aspersā; auriculis æqualibus, distanter sulcatis.*

THE ZICZAG PECTEN. Shell orbicular, inequivalve; left valve concavely flattened, right valve extremely convex, equilateral; left valve concentrically very finely striated, radiately grooved, grooves about thirty, irregular, right valve rayed with twenty grooves, which are linear and regular; reddish-purple, left valve promiscuously rayed with ash, and sprinkled with small white spots; ears equal, distantly grooved.

Ostrea ziczac, Linnæus, Syst. Nat. p. 1144.

Pecten ziczac, Chemnitz.

Hab. Red Sea and Philippine Islands.

This well-known species is remarkable for its very inequivalve proportions, and rich colouring.



130 a



131 a



131 b



130 b



132 a



132 b



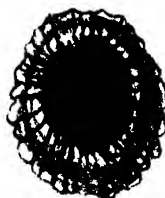
133 a



134 a



134 b



133 b

PATELLA.

PLATE XL.

Species 130. (Mus. Cuming.)

PATELLA NAVICULA. *Pat. testā ovatā, elevato-conoideā, crassiusculā, apice subcentrali, radiatim liratā, liris numerosis, prominentibus, versus marginem obsoletē granulatis, interstitiis lirā minore granulatā; nigricante-cinereā, liris albidis, intus medio castaneā.*

THE LITTLE BOAT LIMPET. Shell ovate, elevately conoid, rather thick, apex nearly central, radiately ridged, ridges numerous, prominent, obsoletely granuled towards the margin, interstices with a smaller granuled ridge; blackish-ash, ridges white, interior chestnut in the middle.

Hab. Mazatlan; Lieut. Shipley, R.N.

The ridges of this little high conical shell have a prominent wrinkle-like appearance.

Species 131. (Mus. Cuming.)

PATELLA CANTHARUS. *Pat. testā ovatā, tenuiculā, convexā, apice valdē antico, acuto, uncinato, laccigatā; nigrā, albo irregulariter maculatā, intus nigricante-castaneā.*

THE BEETLE LIMPET. Shell ovate, rather thin, convex, apex very anterior, sharp, hooked, smooth; black, irregularly blotched with white, interior blackish-chestnut.

Hab. New Zealand; Earl.

Very characteristic in form and colouring, the apex being sharply hooked and bent over to the anterior margin, whilst the surface is smooth, promiscuously mottled with white blotches upon a black ground.

Species 132. (Mus. Cuming.)

PATELLA CORRUGATA. *Pat. testā oblongo-ovatā, valdē depressā, subirregulari, radiatim costatā, costis perpaucis, distantibus, obtusis, corrugatis, apice plus minus croso; albidā, costarum interstitiis circa apicem nigris, intus medio castaneā.*

THE SHRIVELLED LIMPET. Shell oblong-ovate, very depressed, rather irregular, radiately ribbed, ribs very

few, distant, obtuse, wrinkled, apex more or less eroded; whitish, interstices between the ribs black round the apex, interior chestnut in the middle.

Hab. Acapulco.

A depressly flattened oblong species, of irregular growth, rudely sculptured with a few widely distant obtuse ribs, that give the shell a peculiar shrivelled appearance.

Species 133. (Mus. Cuming.)

PATELLA PLANA. *Pat. testā rotundato-ovatā, valdē depressā, planā, irregulari, apice subcentrali, vix elevato, radiatim rudē sulcatā, liris intermediis valdē irregularibus, corrugatis, versus marginem pustulatis; albidā, sulcis ceruleo-nigro tinctis.*

THE FLAT LIMPET. Shell rotundately ovate, very depressed, flat, irregular, apex nearly central, scarcely raised, radiately rudely grooved, intermediate ridges very irregular, wrinkled, pustuled towards the margin; whitish, grooves stained with blue-black.

PHILIPPI, Abbild. und Besch. Conch. Patella, pl. 2. f. 3.
Hab. Valparaiso.

A very characteristic rudely flattened species, very irregularly wrinkled, ridged, and pustuled.

Species 134. (Mus. Cuming.)

PATELLA MELANOLEUCA. *Pat. testā ovatā, elevato-conoideā, crassiusculā, apice subcentrali, radiatim liratā, liris plus minus obsoletis, obscure granulatis; nigrā, albo variegatā, intus albā, medio intensē castaneā.*

THE PIED LIMPET. Shell ovate, elevately conoid, rather thick, apex nearly central, radiately ridged, ridges more or less obsolete, obscurely granulated; black, variegated with white, interior white, dark chestnut in the middle.

GMELIN, Syst. Nat. 13th edit.

Hab. —?

A deep conical shell, of rather stout substance, faintly grain-striated, pied with black and white.

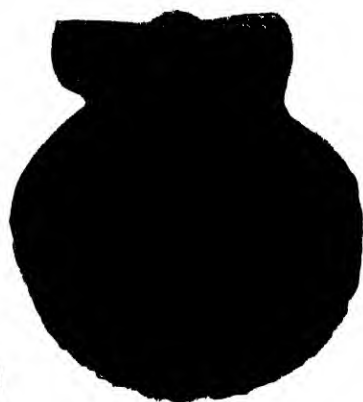




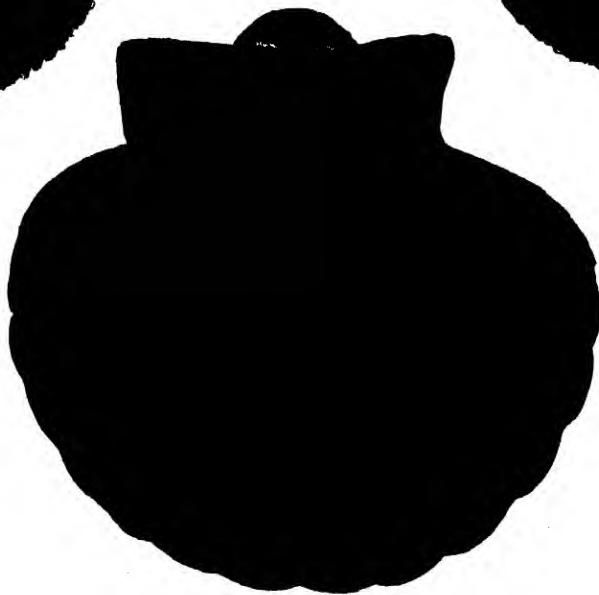
30.



31 a



31 b



32.



PECTEN

PLATE VII.

Species 30. (Mus. Cuming.)

PECTEN DENTATUS. *Pect. testā semiglobosā, æquilaterali, inæquivalvi; valvā dextrā valde rotundato-converā, valvā sinistrā concavo-planatā, in dextrā immersā, radiatim costatā et sulcatā, costis sexdecim ad septendecim, liris et unguatis, costis valvæ dextræ rotundatis, lævibus, ad marginem conspicuè dentatis; valvā sinistrā cinereo-fuscā, purpureo-rufo subinctā, dextrā fulvā, immaculatā; auriculis æqualibus, sinistrorsum inclinatīs.*

THE TOOTHED PECTEN. Shell semiglobose, equilateral, inequivalve; right valve very rotundately convex, left valve concavely flattened, immersed in the right valve, radiately ribbed and grooved, ribs sixteen to seventeen, ridged and angled, ribs of the right valve rounded, smooth, conspicuously toothed at the margin; left valve ash-brown, faintly tinged with purple-red, right valve fulvous, unspotted; ears equal, bent over towards the left valve.

SOWERBY, Pro. Zool. Soc. 1835, p. 109.

Hab. St. Elena, West Columbia (found among stones and sand in twelve fathoms); Cuming.

Chiefly distinguished by the prominent extent to which the left valve is immersed in the right one, leaving its dentated margin standing conspicuously up all round.

Species 31. (Fig. a, b, Mus. Cuming.)

PECTEN VENTRICOSUS. *Pect. testā subglobosā, æquilaterali, subæquivalvi; valvin, dextrā paulo majore, crassiusculis, ventricosis, costis octodecim distinctis subplanulatis radiatis, interstitiis concentricis tenuistriatis; purpureo-luccā, vel nigrā, albo-marmoratā, valvā dextrā sæpe pallidiore; auriculis majusculis, subæqualibus.*

THE VENTRICOSE PECTEN. Shell somewhat globose, equilateral, nearly equivalve; valves, the right valve being somewhat larger, rather thick, ventricose, rayed

with eighteen distinct rather flattened ribs, the interstices between which are concentrically very finely striated; purple-lake, or black, marbled with white, right valve often paler; ears rather large, nearly equal.

Pecten tumidus, Sowerby (not of Turton), Pro. Zool. Soc. 1835, p. 109.

Pecten ventricosus, Sowerby (in Thesaurus Conch.).

Hab. St. Elena, West Columbia (in sandy mud at a depth of six to ten fathoms), and Philippine Islands: Cuming.

Chiefly characterized by its strong ventricose growth, and rich marbled colouring.

Species 32. (Mus. Cuming.)

PECTEN FUMATUS. *Pect. testā elongato-ovalā, æquilaterali, inæquivalvi; valvā sinistrā concavo-planā, dextrā subimmersā, costis duodecim angustis plano-elevatis, utrinque angulatis subdistantibus radiatā; valvā dextrā valde convexā, costis latioribus, convexis, prope marginem plus minus evanidis; valvā sinistrā intensè funeo-purpureā, dextrā livido-cinereā, prope umbonem purpureo-rufā; auriculis æqualibus, sinistrorsum inclinatīs.*

THE SMOKED PECTEN. Shell elongately ovate, equilateral, inequivalve; left valve concavely flattened, a little immersed in the right valve, rayed with twelve narrow flatly raised rather distant ribs angled on each side; right valve very convex, with the ribs broader, convex, and more or less fading near the margin; left valve deep smoky-purple, right valve livid-ash, purple-red near the umbo; ears equal, bent forward towards the left valve.

Hab. Sydney, Australia.

Distinguished by the flatly angled form of the left ribs, and peculiar dark smoky colouring.



135 a



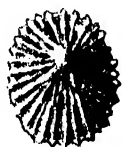
136 a



136 b



135 b



137 a



137 b



138 a



139 a



139 b



138 b

PATELLA.

PLATE XII.

Species 135. (Mus. Cuming.)

PATELLA OCCIDENTALIS. *Pat. testā quadrato-ovalā, elevato-convexā, radiatim costatā, costis superficialibus, obtusis, alternatim brevioribus; fuscescente, nigro-tesselatā, costis pellucido-albis, intus albidā.*

THE WESTERN LIMPET. Shell somewhat squarely ovate, elevately convex, radiately ribbed, ribs superficial, obtuse, alternately shorter, brownish; tessellated with black, ribs transparent white, interior whitish.

Hab. West Indies.

The alternate ribs of this species do not reach to the apex, and they are all of a transparent white substance, whilst the interstices are confusedly tessellated with black upon a brownish ground.

Species 136. (Mus. Cuming.)

PATELLA PARASITICA. *Pat. testā orbiculari, elevato-convexā, cyathiformi, apice anticè inclinato, striatā aut rudè cancellatā; lutescente-albā, cæruleo-nigro viridè radiatim vel undatim strigatā, intus cærulescente.*

THE PARASITIC LIMPET. Shell orbicular, elevately convex, cup-shaped, apex inclined anteriorly, striated or rudely cancellated; yellowish-white, radiately or undately streaked with blue-black, interior bluish.

D'Orbigny, Voy. dans l'Amérique, pl. 81. f. 1 to 3.

Hab. Valparaiso (on the rocks); Cuming.

A little raised cup-like shell, variously rayed or waved with blue-black upon a yellowish ground.

Species 137. (Mus. Cuming.)

PATELLA BALANOIDES. *Pat. testā ovalā, elevato-convexā, radiatim costatā, costis angustis, subrudibus, interstitiis concavis; fuscescente-albā, circa apicem punctis nigris promiscuè aspersā, intus albā, medio castaneā.*

THE BARNACLE LIMPET. Shell ovate, elevately convex, radiately ribbed, ribs narrow, rather rude, interstices concave; brownish-white, promiscuously sprinkled

round the apex with black dots, interior whitish, chestnut in the middle.

Hab. West Indies.

The ribs of this species are narrow, irregular, and rather rude in structure, with the interstices between them gradually concave. The outer surface of the shell is of a dull stone-white, promiscuously dotted round the apex with black.

Species 138. (Mus. Cuming.)

PATELLA LEUCOPLEURA. *Pat. testā elevato-conicā, crassiusculā, basi ferè orbiculari, apice obtusā, radiatim liratā, liris subirregularibus, funiculatis; cærulescentinereā, liris nigricantibus, intus albā, margine conspicuè lineato.*

THE WHITE-SIDE LIMPET. Shell elevately conical, rather thick, nearly orbicular at the base, obtuse at the apex, radiately ridged, ridges rather irregular, corded; bluish-ash, ridges blackish, interior white, margin conspicuously lined.

GMELIN, Syst. Nat. 13th edit.

Hab. West Indies.

Particularly distinguished by its raised conical form, rayed throughout with fine blackish corded ridges upon a light slate ground.

Species 139. (Mus. Cuming.)

PATELLA COFFEA. *Pat. testā ovalā, convexo-depressā, radiatim densè lirato-striatā, semper pererosā; intus extusque fusco-nigrā, margine tenuè denticulato.*

THE COFFEE LIMPET. Shell ovate, convexly depressed, radiately densely ridge-striated, always very much eroded; brown-black within and without, finely denticulated at the margin.

Hab. Valparaiso; Cuming.

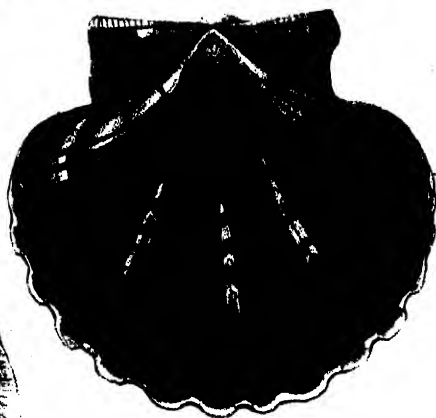
A dark brown species, of simple character, always much eroded.



33.



34.



35.



36.



PECTEN.

PLATE VIII.

Species 33. (Mus. Cuming.)

PECTEN SINENSIS. *Pect. testā subelongato-ovalā, æquilateralī, inæquivalvi; valvā sinistrā excavato-concavā, in dextrā immersā, costis undecim subangustis convexo-planulatis utrinque subangulatis radiatā, rufescente-fuscā, maculis albidis angularibus rufo-marginatis interdum adpersā; valvā dextrā convexissimā, costis latis, convexis, confertis, radiatim sulcatis, cinereo-rufā, versus umbonem indistinctē marmoratā; auriculis magnis, sinistrorsum inclinatīs.*

THE CHINESE PECTEN. Shell rather elongately ovate, equilateral, inequivalve; left valve excavately concave, immersed in the right valve, rayed with eleven rather narrow convexly flattened ribs, slightly angled on both sides, reddish-brown, sometimes sprinkled with red-edged angular white spots; right valve very convex, with the ribs convex, broad, close-set, and radiately grooved, ash-red, mottled towards the umbo; ears large, bent over towards the left valve.

SOWERBY, Thesaurus Conch. vol. i. p. 48. pl. 16. f. 120, 121, and 134.

Pecten excavatus? Anton.

Hab. China.

Chiefly characterized by the concavely immersed growth of the left valve, which is most conspicuous in the young.

Species 34. (Mus. Saul.)

PECTEN FLORIDUS. *Pect. testā vix elongato-ovalā, æquilateralī, inæquivalvi; valvis compressis, concentricè tenuistriatis, costis octodecim radiatis; valvā sinistrā planā, medio subconvexā, costis valde elevatis, angustis, medio angulatis, dextrā convexā, costis valde elevatis, prominentibus, utrinque angulatis, medio sulcatis; valvā sinistrā roseo-fuscescente, obscurè maculatā, dextrā pallidiorē, immaculatā; auriculis æqualibus.*

THE FLORID PECTEN. Shell rather elongately ovate, equilateral, inequivalve; valves compressed, concentrically finely striated, rayed with eighteen ribs; left valve flat, slightly convex in the middle, with the ribs much raised, narrow, angled in the middle; right valve convex, with the ribs much raised, prominent, angulated on each side, grooved down the middle; left valve rose-brown, obscurely spotted, right valve paler, unspotted; ears equal.

HINDS, Moll. Voy. Sulphur, p. 60. pl. 17. f. 6.

Hab. San Diego, California (in mud at the depth of five fathoms); Belcher.

Remarkably distinguished by the prominent development of the ribs, which in the left valve are sharply angled

in the middle, and in the right valve are squared and then grooved in the middle.

Species 35. (Mus. Cuming.)

PECTEN FUSCUS. *Pect. testā subelongato-ovalā, æquilateralī, inæquivalvi; valvā sinistrā planā, prope umbonem concavā, in valvā dextrā subimmersā, costis quatuordecim convexis subangustis radiatā, fuscescente, utulato-fusco tinctā et obscurè maculatā; valvā dextrā convexā, costis quindecim plano-convexis latioribus radiatā, livido-cinereā, prope umbonem rufescente maculatā; auriculis majusculis, sinistrorsum inclinatīs.*

THE BROWN PECTEN. Shell somewhat elongately ovate, equilateral, inequivalve; left valve flat, concave near the umbo, a little immersed in the right valve, rayed with fourteen rather narrow convex ribs, light brown, stained and obscurely spotted with burnt brown; right valve convex, rayed with fifteen flatly convex broader ribs, livid-ash, spotted with light red near the umbo; ears rather large, bent over towards the left valve.

KLEIN, Sowerby, Thesaurus Conch. vol. i. p. 47. pl. 16. f. 118, 119.

Hab. Moreton Bay, East Australia; Strauge.

Of the same peculiar livid-ash colour on the right valve as in *P. fumatus*.

Species 36. (Mus. Cuming.)

PECTEN NOVE-ZELANDIÆ. *Pect. testā subelongato-orbiculari, æquilateralī, inæquivalvi; valvis concentricè minutissimè striatis; sinistrā planā, prope umbonem concavissimā, in valvā dextrā subimmersā, costis subangustis convexis quatuordecim nitidè radiatā, albicante, spadiceo-rufo tinctā; dextrā expanso-convexā, costis quindecim sublatis radiatā, albā; auriculis æqualibus, sinistrorsum subinclinatīs.*

THE NEW ZEALAND PECTEN. Shell somewhat elongately orbicular, equilateral, inequivalve; valves very minutely concentrically striated; left valve flat, rather concave near the umbo, a little immersed in the right valve, neatly rayed with fourteen rather narrow convex ribs, whitish, stained with fawn-red; right valve expandedly convex, rayed with fifteen rather broader ribs, white; ears equal, bent a little forwards towards the left valve.

Hab. New Zealand; Hart.

A beautifully symmetrical neatly-ribbed species, of a delicate subtransparent white, stained on the left valve with rich fawn-red.



141a



140a



141b



142a



143a



143b



142b



144a



144b



140b

PATELLA.

PLATE XLII.

Species 140. (Mus. Cuming.)

PATELLA MAMILLATA. *Pat. testā ovatā, anticē vix attenuatā, acutē convexā, apice uncinatā, squamarum series numerosis minutis muricato-radiatā, striis concentricis decussatā; sordidē olivaceā, obscurē lateraliter biradiatā, intus cærulescente, maculā castaneā centrali anticē peculiariter productā, margine nigricante, lato.*

THE NIPPLE LIMPET. Shell ovate, slightly attenuated in front, sharply convex, hooked at the apex, prickly rayed with numerous ridges of fine scales, decussated with concentric striæ; dirty olive, obscurely laterally two-rayed, interior bluish, with a central chestnut blotch, peculiarly produced anteriorly, margin blackish, broad.

NUTTALL, MS., Mus. Cuming.

Hab. Upper California.

The outer surface of this species is prickly rayed throughout with minute scales, whilst in the interior the central chestnut blotch is curiously attenuated and produced in front.

Species 141. (Mus. Cuming.)

PATELLA UNCINATA. *Pat. testā ovalā, acutē conoideā, apice paululum anticē uncinato, radiatim profusē tenuilicatā, intersticiis obscurē cancellatis; albidā, nigricante-fusco tessellatā aut diagonaliter strigatā, intus cærulescente-albā, pellucido-tessellatā et castaneo pallidē tinctā.*

THE HOOKED LIMPET. Shell ovate, sharply conoid, apex a little hooked anteriorly, radiately profusely finely ridged, interstices obscurely cancellated; whitish, tessellated or diagonally streaked with blackish-brown, interior bluish-white, transparent tessellated and stained with faint chestnut.

Hab. — ?

A very prettily tessellated species, closely finely ridged throughout, the shell being sharply conical and slightly hooked at the apex.

Species 142. (Mus. Cuming.)

PATELLA BIRADIATA. *Pat. testā suborbiculari, conoideo-depressā, apice subcentrali, radiatim striato-liratā; albidā, cæruleo-nigro prope marginem radiatā, radiis duabus latis pallidis posticē conspicuē ornatā, intus eodem colore vividē pictā.*

THE TWO-RAYED LIMPET. Shell nearly orbicular, conoidly depressed, apex nearly central, radiately striately ridged; whitish, rayed with blue-black near the margin, conspicuously ornamented posteriorly with two broad pale bands, interior vividly painted with the same colour.

Hab. China Seas.

This species is characterized, among other features, by two broad pale bands, radiating from behind the apex, especially distinct in the interior.

Species 143. (Mus. Cuming.)

PATELLA NIMBUS. *Pat. testā ovalā, anticē vix attenuatā, subacutē convexā, apice subantico, undique decussatim undato-striatā, striis radiantibus fortioribus; olivaceā, lutescente eleganter radiatā, circa apicem purpurascente.*

THE NIMBUS LIMPET. Shell ovate, slightly attenuated anteriorly, rather sharply convex, apex somewhat anterior, everywhere decussately wave-striated, the radiating striæ being the stronger; olive, elegantly rayed with faint yellow, purplish round the apex.

Hab. — ?

The rays of this species are very softly expressed, and have more the appearance of rays of light than is presented in any other species, whilst the surface striæ are finely waved throughout.

Species 144. (Mus. Cuming.)

PATELLA LIMA. *Pat. testā oblongo-ovalā, convexā, apice antico, subuncinato, radiatim confertim lirato-striatā, striis undique minutissimē muricato-squamatis; virescente-olivaceā, intus vividē cæruleo-virescente, margine purpureo-fuscā.*

THE FILE LIMPET. Shell oblong-ovate, convex, apex anterior, rather hooked, radiately closely ridge-striated, striæ very minutely prickly scaled; greenish-olive, interior bright blue-green, purple-brown at the margin.

Hab. — ?

The entire surface of this species is closely sculptured with very minute prickly scales.





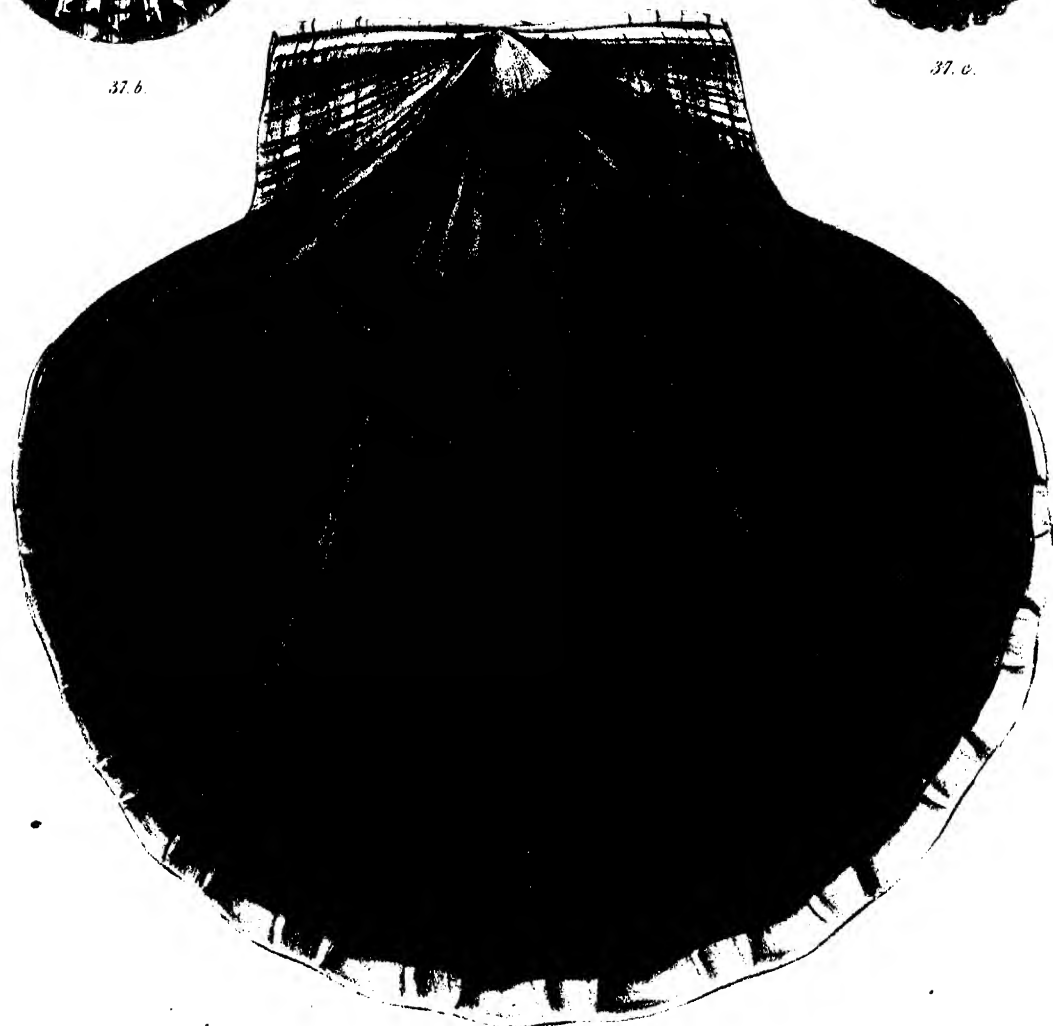
37 a



37. b



37. c.



PATELLA.

| | Plate. | Species. | | Plate. | Species. |
|---------------------------------------|----------|----------|---------------------------------------|----------|----------|
| <i>achates, Reeve</i> | XXXVIII. | 123 | <i>dira, Reeve</i> | XXXII. | 92 |
| <i>aculeata, Reeve</i> | XXXII. | 90 | <i>discors, Philippi</i> | XXIX. | 78 |
| <i>affinis, Reeve</i> | XXXV. | 108 | <i>Dunkeri, Philippi</i> | XXXVIII. | 124 |
| <i>anca, Martyn</i> | V. | 9 | <i>Earlii, Reeve</i> | XXVII. | 71 |
| <i>albicostata, C. B. Adams</i> | XXXIX. | 128 | <i>electrina, Reeve</i> | XXII. | 55 |
| <i>amona, Say</i> | XXVII. | 70 | <i>elegans, Philippi</i> | XXXVII. | 115 |
| <i>amussitata, Reeve</i> | XXX. | 83 | <i>enneagona, Reeve</i> | XVIII. | 44 |
| <i>araneosa, Reeve</i> | XXXVI. | 111 | <i>exarata, Nuttall</i> | XIX. | 47 |
| <i>Araucana, D'Orbigny</i> | XXVI. | 66 | <i>exusta, Reeve</i> | XV. | 35 |
| <i>argentata, Sowerby</i> | VIII. | 15 | <i>fenestrata, Nuttall</i> | XXXVIII. | 121 |
| <i>Argenvillei, Krauss</i> | X. | 20 | <i>ferruginea, Sowerby</i> | XVII. | 40 |
| <i>articulata, Reeve</i> | XXXIII. | 97 | <i>ferruginea, Gmelin</i> | VIII. | 14 |
| <i>aspera, Lamarck</i> | XI. | 23 | <i>floccata, Reeve</i> | XXXV. | 106 |
| <i>aster, Reeve</i> | XXX. | 80 | <i>Fuegiensis, Reeve</i> | XXVIII. | 73 |
| <i>atramentosa, Reeve</i> | XVII. | 41 | <i>funbris, Reeve</i> | XXII. | 54 |
| <i>Balanoides, Reeve</i> | XLI. | 137 | <i>fungus (Pectura), Meuschen</i> .. | XXXV. | 105 |
| <i>biradiata, Reeve</i> | XLII. | 142 | <i>gorgonica, Humphreys</i> | VI. | 11 |
| <i>Bonnardi, Payraudeau</i> | XXI. | 51 | <i>granatina, Linnaeus</i> | III. | 4 |
| <i>Borneensis, Reeve</i> | XXXVI. | 113 | <i>grano-striata, Reeve</i> | XXXIX. | 126 |
| <i>caerulea, Lamarck</i> | XIII. | 28 | <i>granularis, Linnaeus</i> | XIV. | 31 |
| <i>Candei, D'Orbigny</i> | XV. | 34 | <i>Grænländica, Chemnitz</i> | XXVII. | 70 |
| <i>canescens, Reeve</i> | XXXIV. | 103 | <i>guttata, D'Orbigny</i> | XXXII. | 91 |
| <i>cantharus, Reeve</i> | XL. | 131 | <i>imbricata, Reeve</i> | XXXII. | 93 |
| <i>Chiloensis, Reeve</i> | XXXIII. | 98 | <i>inradiata, Reeve</i> | XXI. | 77 |
| <i>Chitonoides, Reeve</i> | XXI. | 52 | <i>Jacksoniænsis, Reeve</i> | XXXIX. | 127 |
| <i>cimeliata, Reeve</i> | XXXVII. | 116 | <i>laciniata, Reeve</i> | XXXIV. | 100 |
| <i>cinis, Reeve</i> | XXIV. | 60 | <i>lacunosa, Reeve</i> | XXXVIII. | 120 |
| <i>clathratula, Reeve</i> | XIV. | 30 | <i>lanx, Reeve</i> | XXX. | 82 |
| <i>Clealandi, Sowerby</i> | XXVII. | 70 | <i>lentiginosa, Reeve</i> | XXXVI. | 110 |
| <i>clypeator, Lesson</i> | XVI. | 38 | <i>leucophæa, Nuttall</i> | XXXIV. | 101 |
| <i>clypeus, Born</i> | XXVII. | 70 | <i>leucopleura, Gmelin</i> | XLI. | 138 |
| <i>cochlear, Gmelin</i> | XII. | 24 | <i>lima, Reeve</i> | XLII. | 144 |
| <i>coffen, Reeve</i> | XLI. | 139 | <i>limbata, Philippi</i> | XIII. | 29 |
| <i>compressa, Linnaeus</i> | VII. | 13 | <i>lineata (Lottia) Gray</i> | XXIII. | 58 |
| <i>conspicua, Philippi</i> | VII. | 12 | <i>livescens, Reeve</i> | XXIX. | 75 |
| <i>corrugata, Reeve</i> | XL. | 132 | <i>longicosta, Lamarck</i> | VI. | 11 |
| <i>costoso-plicata, Martini</i> | VIII. | 14 | <i>lugubris, Dunker</i> | XIV. | 32 |
| <i>cretacea, Reeve</i> | XXI. | 53 | <i>Luzonica, Reeve</i> | XXXI. | 86 |
| <i>Cubensis, Reeve</i> | XXXIX. | 125 | <i>Magellanica, Martini</i> | X. | 19 |
| <i>Cumingii, Reeve</i> | XVI. | 37 | <i>mamillata, Nuttall</i> | XLII. | 140 |
| <i>decora, Philippi</i> | XV. | 33 | <i>margaritaria, Chemnitz</i> | XXVIII. | 74 |
| <i>Delessertii, Philippi</i> | XVII. | 40 | <i>melanoleuca, Gmelin</i> | XL. | 134 |
| <i>denticulata, Martyn</i> | XIV. | 31 | <i>Mexicana, Broderip and Sowerby</i> | I. | 1 |
| <i>depressa, Pennant</i> | XVIII. | 42 | <i>miniata, Born</i> | IX. | 17 |
| <i>depsta, Reeve</i> | XXXI. | 85 | <i>mixta, Reeve</i> | XXXIX. | 129 |
| <i>diaphana, Nuttall</i> | XXIV. | 61 | <i>morbida, Reeve</i> | XXV. | 64 |

PECTEN.

PLATE IX.

Species 37. (Fig. a, b, c, Mus. Cuming.)

PECTEN GIBBUS. *Pect. testā subgibbā, æquivalvi, æquilaterali, costis mediocribus octodecim ad viginti radiatā, costis interstitiisque minutè creberrimè serrato-liratis, rosaceā vel albā, cinereo-nigricante marmoratā, interdum intensè purpurascens-sanguineā, immaculatā, valvā dextrā plerumque pallidiore; auriculis subæqualibus.*

THE GIBBOUS PECTEN. Shell rather gibbous, equivalve, equilateral, rayed with eighteen to twenty middling ribs, ribs and interstices minutely very closely serrately ridged, pink or white, marbled with ash-black, sometimes deep purplish blood-colour, unspotted, right valve generally paler; ears nearly equal.

Ostrea gibba, Linnaeus, Syst. Nat. (12th edit.) p. 1147.

Pecten gibbus, Lamarck.

Pecten rubicundus, Chemnitz.

Pecten Sowerbyi, Guilding.

Ostrea flabellum, Gmelin.

Hab. Senegal, West Africa.

Mostly of a marbled variegated painting, although the marbling is sometimes wanting.

Species 38. (Mus. Cuming.)

PECTEN MAXIMUS. *Pect. testā suboblongo-rotundatā, vix æquilaterali, inequivalvi, valvis radiatim irregulariter lineari-liratis, costis duodecim ad tredecim convexis; valvā sinistrā planulatā, medio leviter elevatā, prope umbonem depresso-concavā, in valvā dextrā subimmersā, rufo-fuscā, castaneo sparsim maculatā; valvā dextrā convexā, subgibbā, albidā; auriculis æqualibus.*

THE LARGEST PECTEN. Shell somewhat oblong-rounded, nearly equilateral, inequivalve, valves radiately irregularly linearly ridged, with twelve to thirteen convex ribs; left valve flattened, slightly raised in the middle, depressly concave near the umbo, a little immersed in the right valve, red-brown, sparingly spotted with chestnut; right valve convex, rather gibbous, whitish; ears equal.

Ostrea maxima, Linnaeus, Syst. Nat. (12th edit.) p. 1144.

Pecten maximus, Lamarck.

Pecten vulgaris, Du Costa.

Hab. British and Mediterranean Seas.

This well-known scallop is chiefly distinguished from its nearest ally, the *P. Jacobæus*, by the broad gentle convexity of the right ribs.

PATELLA.—INDEX.

| | Plate. | Species. | | Plate. | Species. |
|--|----------|----------|--|---------|----------|
| <i>navicula</i> , <i>Reeve</i> | XL. | 130 | <i>scalata</i> , <i>Reeve</i> | XXXI. | 89 |
| <i>nigrisquamata</i> , <i>Reeve</i> | II. | 3 | <i>scutellaris</i> , <i>Lamarck</i> | XX. | 49 |
| <i>nigro-lineata</i> , <i>Reeve</i> | XVIII. | 43 | <i>spectrum</i> , <i>Nuttall</i> | XXIX. | 76 |
| <i>nigro-punctata</i> , <i>Reeve</i> | XXIII. | 57 | <i>squamifera</i> , <i>Reeve</i> | XXXII. | 94 |
| <i>nigro-sulcata</i> , <i>Reeve</i> | XXX. | 84 | <i>stelliformis</i> , <i>Reeve</i> | XX. | 48 |
| <i>nimbus</i> , <i>Reeve</i> | XLII. | 143 | <i>stellaris</i> (<i>Patelloidea</i>), <i>Quoy</i> | XXXVI. | 114 |
| <i>Nuttalliana</i> , <i>Reeve</i> | XXX. | 81 | <i>stellularia</i> , <i>Quoy</i> | XXXIII. | 96 |
| <i>occidentalis</i> , <i>Reeve</i> | XLJ. | 135 | <i>stipulata</i> , <i>Reeve</i> | XXXVII. | 117 |
| <i>oculus</i> , <i>Born</i> | II. | 2 | <i>striata</i> (<i>Patelloidea</i>), <i>Quoy</i> | XXXIII. | 99 |
| <i>open</i> , <i>Nuttall</i> | XXIX. | 79 | <i>tenera</i> , <i>C. B. Adams</i> | XXXIV. | 104 |
| <i>Oregona</i> , <i>Nuttall</i> | XXXVI. | 112 | <i>tessellata</i> , <i>Müller</i> | XXVII. | 70 |
| <i>ornata</i> , <i>Dillwyn</i> | XXVIII. | 74 | <i>testudinalis</i> , <i>Müller</i> | XXVII. | 70 |
| <i>parasitica</i> , <i>D'Orbigny</i> | XLI. | 136 | <i>testudinaria</i> , <i>Linnaeus</i> | IV. | 6 |
| <i>penicillata</i> , <i>Reeve</i> | XXXIV. | 102 | <i>toreuma</i> , <i>Reeve</i> | XXVII. | 69 |
| <i>pentagona</i> , <i>Born</i> | XX. | 48 | <i>tramoserica</i> , <i>Martyn</i> | XIII. | 27 |
| <i>petalata</i> , <i>Reeve</i> | XXII. | 56 | <i>umbella</i> , <i>Gmelin</i> | IX. | 17 |
| <i>pica</i> , <i>Reeve</i> | XIX. | 45 | <i>umbonata</i> , <i>Nuttall</i> | XXXV. | 107 |
| <i>plana</i> , <i>Philippi</i> | XL. | 133 | <i>uncinata</i> , <i>Reeve</i> | XLII. | 141 |
| <i>plicata</i> , <i>Born</i> | IX. | 16 | <i>undato-lirata</i> , <i>Reeve</i> | XXIII. | 59 |
| <i>plumbea</i> , <i>Lamarck</i> | III. | 5 | <i>ustulata</i> , <i>Reeve</i> | XXXI. | 88 |
| <i>Pretrei</i> , <i>D'Orbigny</i> | XII. | 26 | <i>variabilis</i> , <i>Sowerby</i> | XXV. | 63 |
| <i>pruinosa</i> , <i>Krauss</i> | XXXV. | 109 | <i>varicosa</i> , <i>Reeve</i> | XI. | 21 |
| <i>puncturata</i> , <i>Lamarck</i> | XXXVIII. | 122 | <i>variegata</i> , <i>Reeve</i> | XVI. | 36 |
| <i>radians</i> , <i>Gmelin</i> | XII. | 25 | <i>venosa</i> , <i>Reeve</i> | X. | 18 |
| <i>rota</i> , <i>Chemnitz</i> | XVII. | 39 | <i>verruculata</i> , <i>Reeve</i> | XXXI. | 87 |
| <i>rustica</i> , <i>Linnaeus</i> | V. | 8 | <i>vespertina</i> , <i>Reeve</i> | XXVI. | 67 |
| <i>rustica</i> , <i>Menke</i> | IV. | 7 | <i>vidua</i> , <i>Reeve</i> | XI. | 22 |
| <i>saccharina</i> , <i>Linnaeus</i> | XXVIII. | 72 | <i>viridula</i> , <i>Lamarck</i> | XII. | 26 |
| <i>sanguinalis</i> , <i>Reeve</i> | XXXIII. | 95 | <i>vulgaris</i> , <i>Da Costa</i> | XVIII. | 42 |
| <i>sanguinans</i> , <i>Reeve</i> | VI. | 10 | <i>vulgata</i> , <i>Linnaeus</i> | XVIII. | 42 |
| <i>sanguinolenta</i> , <i>Gmelin</i> | IX. | 17 | <i>zebra</i> , <i>Reeve</i> | IV. | 7 |
| <i>scabra</i> , <i>Nuttall</i> | XXXVII. | 119 | <i>zebrina</i> , <i>Lesson</i> | XXV. | 65 |

ERRATA.

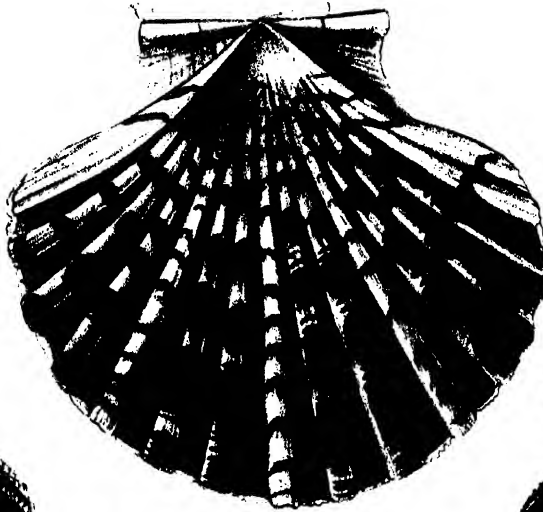
Sp. 15. For *P. cuprea*, *Reeve*, read *P. argentata*, *Zool. Beechey's Voyage*, p. 148. pl. 39. f. 7; and cancel synonyme *P. lugubris*.

MONOGRAPH

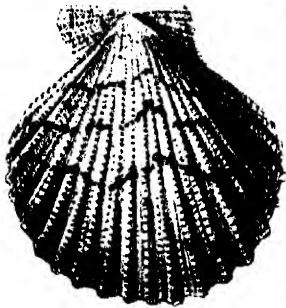
OF THE GENUS

N A S S A.

"What nature would compile,
Nature knows to reconcile,
And wisdom, ever at her side,
Of all her children's justified."—*Barron Field.*



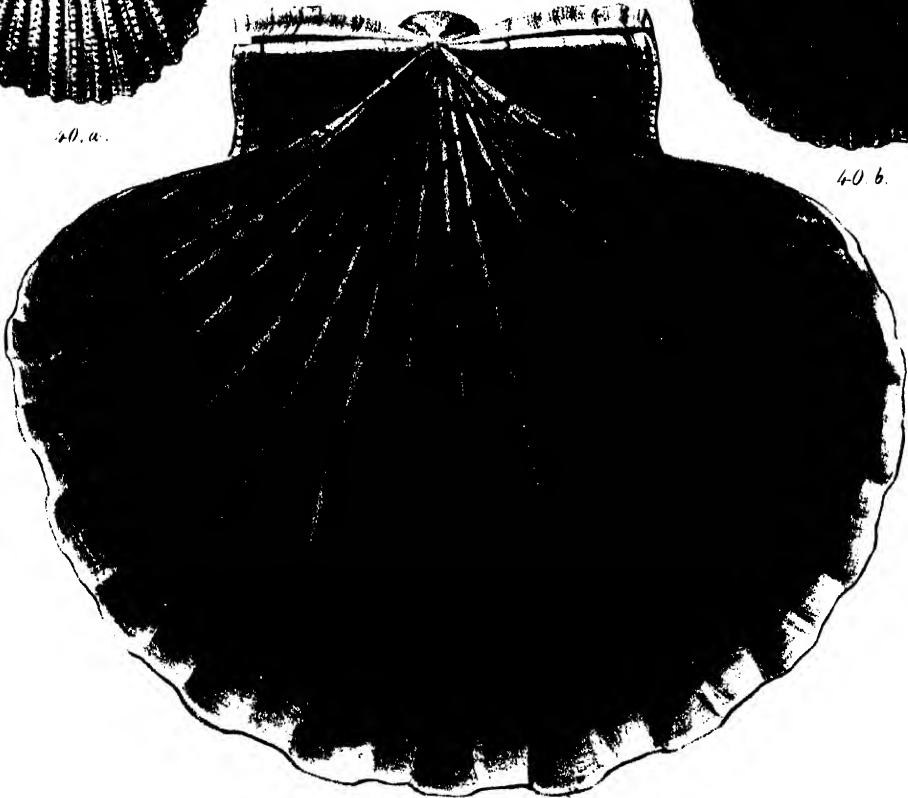
39. a.



40. a.



40. b.



39. b.



PECTEN.

PLATE X.

Species 39. (Fig. *a*, Mus. Saul, and Fig. *b*,
Mus. Cuming.)

PECTEN JACOBÆUS. *Pect. testā suboblongo-ovalā, sub-
æquilaterali, inequivalvi, costis quatuordecim ad quin-
decim radiatā; valvā sinistrā concavo-planulatā, costis
plus minus elevatis, supernè rotundatis, interdum nar-
ginem versus planulatis et tenuè liris, rufo-fuscā,
purpureo-castaneo maculatā; valvā dextrā albā, costis
acutè quadratis et liris, in testā juniore interdum mi-
nutè squamatis, interstitiis profundè excavatis; auriculis
æqualibus.*

THE ST. JAMES PECTEN. Shell somewhat oblong-ovate,
nearly equilateral, inequivalve, rayed with fourteen to
fifteen ribs; left valve concavely flattened, ribs more
or less raised, rounded at the upper part, sometimes
flattened and finely ridged towards the margin, red-
brown, spotted with purple-chestnut; right valve
white, with the ribs sharply squared and ridged, in
the young shell sometimes minutely scaled, interstices
deeply excavated; ears equal.

Ostrea Jacobæa, Linnaeus, Syst. Nat. (12th edit.) p. 1144.
Pecten Jacobæus, Lamarck.

Hab. Mediterranean.

In the young shell represented at Fig. 39 *a*, the ribs
are remarkably raised, those of the right valve being
thickly finely squamate throughout.

Species 40. (Fig. *a, b*, Mus. Cuming.)

PECTEN SUBRUFUS. *Pect. testā subrotundatā, tenui, com-
pressiusculā, subæquilaterali, æquivalvi, costis ad viginti
angustis, liris et squamatis, radialā; purpureo-ru-
fescens, vel aurantiā, rix maculatā; auriculis inæqua-
libus.*

THE REDDISH PECTEN. Shell nearly rounded, thin,
rather compressed, nearly equilateral, equivalve,
rayed with about twenty narrow ribs, which are
ridged and squamate; purple-red or orange, scarcely
spotted; ears unequal.

TURTON, Dithyra Brit. p. 210. pl. 17. f. 1.

Pecten opercularis, var., Forbes and Hanley.

Hab. Britain.

There is little doubt of this being anything more than a
variety of *P. opercularis*.



NASSA.

PLATE I.

Genus NASSA, Lamarck.

Testa ovato-conica, plus minus turrata, in sinum profundum aut canalem brevissimum reflexum desinens; spirā aapē canaliculatā; anfractibus plerumque longitudinaliter liris aut costellatis, aapē transversim sulcatis; aperturā subquadrato-orbiculari, columellā callositate nunc tenuē expansā, nunc crassissimā et peramplā, interdum usque ad apicem repandā, labro plerumque denticulato, fauce liratā. Operculum parvum, corneum.

Shell ovately conical, more or less turreted, ending in a deep sinus or very short recurved canal; spire often channelled; whorls generally longitudinally ridged or thin-ribbed, often transversely grooved; aperture somewhat squarely orbicular, columella with a callosity, now thinly expanded, now very thick and large, spread sometimes to the apex, lip generally denticulated, interior ridged. Operculum small, horny.

The *Nassæ* are a group of the Linnæan *Buccina*, mostly small, presenting a great diversity of sculpture, but little variety of form or colour. They are nearly all of solid growth, and are characterized, with few exceptions, by a peculiar callous development next the aperture, which varies according to the species. Proceeding from the columella, it appears in some as a short lamina, while in others it is thickly enamelled, and spread so as to reach nearly to the apex. Some excellent subgenera have been proposed for these typical differences. M. Kiener described several new species under the head of *Buccinum*, in addition to those of Lamarck; some few have been described by M. Deshayes, Mr. Say, Mr. Hinds, and Mr. Powis, and the list was considerably augmented about a year and a half since by the describing, by Mr. Arthur Adams, of the new species in Mr. Cuming's collection. They are chiefly inhabitants of the Eastern Seas.

Species 1. (Mus. Cuming.)

NASSA HIETA. Nass. testā ovato-conicā, subturritā, rufescente, fasciis fusciscentibus cingulatā; spirā acutā, costulis eminentibus coronatā, in anfractu ultimo etate evanescentibus; aperturā albā, subrotundatā, emarginatā, supernè angustatā; labro crasso, extus marginato.

THE ROUGH NASSA. Shell ovately conical, sub-turreted, reddish, encircled with brownish bands; spire sharp, coronated with conspicuous ribs, fading away in the

last whorl with age; aperture white, somewhat rounded, emarginated, narrowed at the upper part; lip thick, margined externally.

Buccinum hirtum, Kiener, Icon. coq. vivantes, p. 63. pl. 19. f. 72.

Hab. Swan River, New Holland; Lieut. Preston.

A very elegantly coronated species, with the spire rising into a sharp turret.

Species 2. (Mus. Cuming.)

NASSA CRENULATA. Nass. testā ovato-conicā, subturritā, fasciis cinereo-fuscis obscurè pictā; spirā acutā, canaliculatā, costulis pliciformibus tenuicoronatā, in anfractu ultimo evanescentibus; aperturā ovatā, albescente, supernè emarginatā, labro acuto, basin versus crenulato, fauce sulcatā.

THE CRENULATED NASSA. Shell ovately conical, sub-turreted, obscurely painted with light ash-brown bands; spire sharp, channelled, finely coronated with small plait-like ribs, fading in the last whorl; aperture ovate, whitish, emarginated at the upper part, lip sharp, crenulated towards the base, interior grooved.

Buccinum crenulatum, Brûgvière, Encyclopédie Méthodique, pl. 394. f. 6.

Hab. Philippine Islands; Cuming.

More finely plicately ribbed than the preceding species, while the lip has a conspicuously crenulated edge.

Species 3. (Mus. Cuming.)

NASSA SEMINODOSA. Nass. testā ovato-conicā, acuminatā, levi, nitidā, fulco-fuscescente; suturā tuberculis moniliformibus ornatā; longitudinaliter plicatā, plicis supernè subnodulosis; anfractu ultimo anticè transversim sulcato; columellā levi, cum callo tenui expanso oblecto, labro anticè dentato, intus sulcato.

THE SEMINODOSE NASSA. Shell ovately conical, acuminate, smooth, shining, fulvous brown; suture ornamented with necklace-like tubercles; longitudinally plaited, plaits subnodose at the upper part; last whorl transversely grooved in front; columella smooth, covered with a thin expanded callosity, lip toothed in front, grooved within.

A. ADAMS, Pro. Zool. Soc. 1851.

Hab. Island of Annua, South Seas (on the reefs); Cuming.



An interesting species, intermediate in its characters between *N. kirta* and *papillosa*.

Species 4. (Mus. Cuming.)

NASSA SUTURALIS. *Nass. testā ovato-turritā, albā, cinerascens-carneo marmoratā, lineis filiformibus intensè rufis subequidistantibus regulariter cingulatā; spirā acutā, subcanaliculatā; anfractibus laevibus, nitentibus, supernè angulatis et nodoso-coronatis; aperturā ovatā, supernè conspicuè emarginatā; columellā callosā, subexpansā, labro anticè crenulato.*

THE SUTURAL NASSA. Shell ovately turreted, whitish, marbled with light ash flesh tint, and encircled regularly with nearly equidistant deep red thread-like lines; spire sharp, subchannelled; whorls smooth, shining, angled and nodosely coronated at the upper part; aperture ovate, conspicuously emarginated at the upper part; columella callous, a little expanded, lip crenulated in front.

Buccinum suturale, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. x. p. 166.

Nassa suturalis, Deshayes.

Hab. Island of Burias, Philippines (in sandy mud at ten fathoms); Cuming.

An elegant faintly mottled shell, encircled throughout at about equal distances with deep red lines. The spire is channelled and nodosely coronated.

Species 5. (Mus. Cuming.)

NASSA GLANS. *Nass. testā ovato-conicā, levi, albā, nitente, ustulato-luteo nebulosā, lineis intensè rufis equidistantibus regulariter cingulatā; spirā acuminatā, prope apicem longitudinaliter plicatā; anfractibus supernè plano-angulatis; aperturā ovatā, supernè emarginatā, labro anticè denticulis muricato.*

THE ACORN NASSA. Shell ovate, conical, smooth, white, shining, clouded with burnt yellow, encircled regularly with equidistant deep red lines; spire acuminate, longitudinally plaited near the apex; whorls flatly angled at the upper edge; aperture ovate, emarginated at the upper part, thickly in the front with denticles.

Buccinum glans, Linnaeus, Syst. Nat. (12th edit.) p. 1200.

Hab. Philippine Islands; Cuming.

A well-known species, characterized, like the preceding, by being encircled throughout with conspicuous equidistant red lines.

Species 6. (Mus. Cuming.)

NASSA MUTABILIS. *Nass. testā ovato-conicā, levi, nitidā, prope apicem longitudinaliter plicatā, fulvo-rufo aut luteo nebulosā; spirā acutā; anfractibus convexis, prope suturas fasciā albā rufo-maculatā cinctis; aperturæ fauce sulcatā.*

THE CHANGEABLE NASSA. Shell ovately conical, smooth, shining, longitudinally plaited near the apex, clouded with fulvous-red and yellow; spire sharp; whorls convex, encircled at the suture with a red-spotted white band; interior of the aperture grooved.

Buccinum mutabilis, Linnaeus, Syst. Nat. (12th edit.) p. 1201.

Buccinum gibbum, Bruguière.

Nassa gibba, Roissy.

Buccinum foliosum, Wood.

Hab. Mediterranean.

Readily distinguished by its mottled colouring and sutural red-blotched band.

Species 7. (Mus. Cuming.)

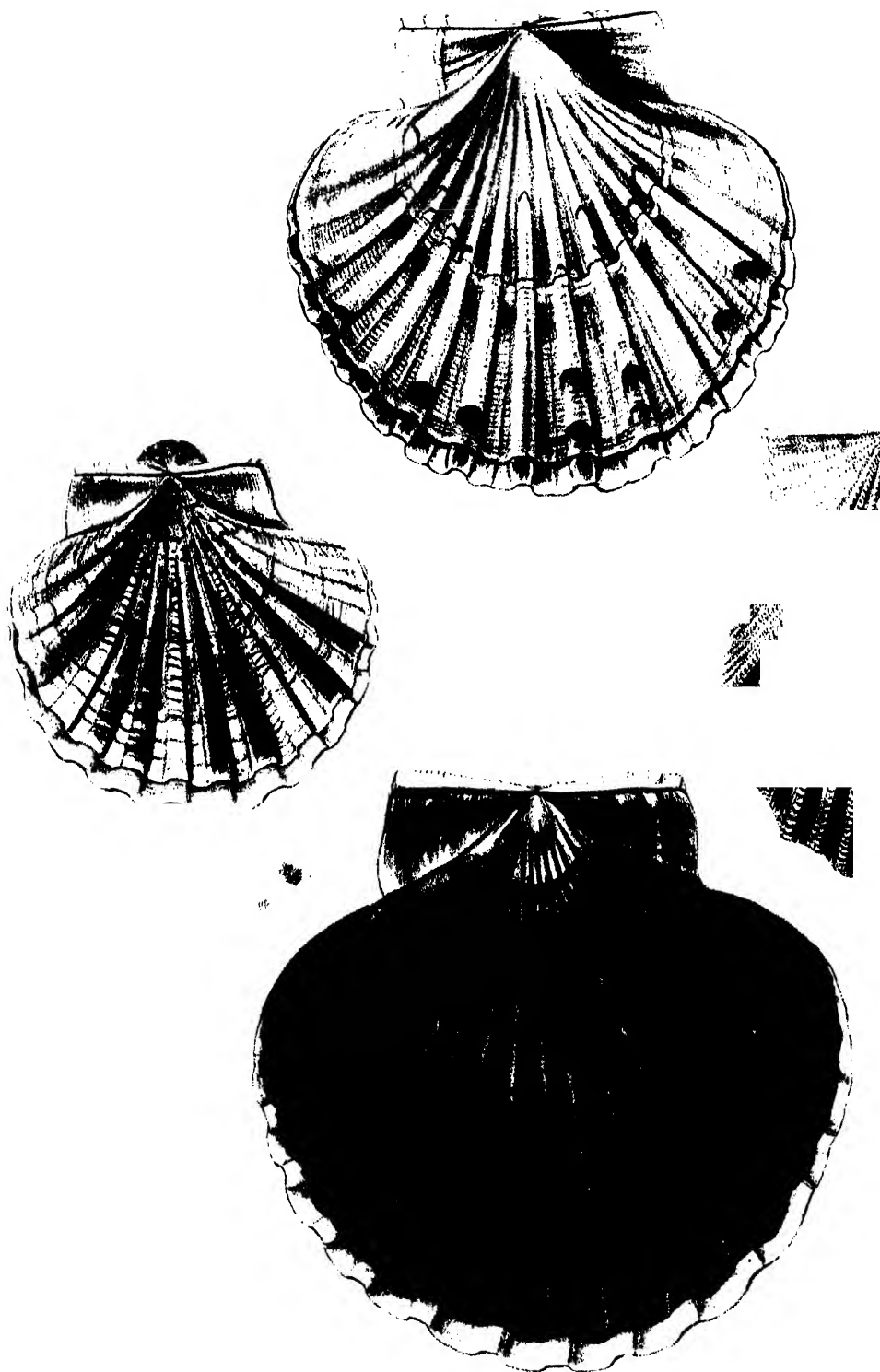
NASSA MARMOREA. *Nass. testā ovato-conicā, levi, nitidā; spirā subacuminatā; albā, luteo-fusco trifasciatim marmoratā; anfractibus planiusculis, supernè subcontractis; columellā subcorrugatā, labro extus varicoso, intus sulcato.*

THE MARBLED NASSA. Shell ovately conical, smooth, shining; spire a little acuminate; whitish, marbled in three bands with yellowish-brown; whorls rather flat, rather contracted about the upper part; columella slightly wrinkled, lip varicose without, grooved within.

A. ADAMS, Proc. Zool. Soc. Mar. 1851.

Hab. Cayayan, Island of Mindanao, Philippines (in sandy mud at twenty-five fathoms); Cuming.

A smooth rather spid shell, contracted about the sutures; bluish-white, encircled with three mottled yellowish-brown bands.



PECTEN.

PLATE XI.

Species 41. (Mus. Saul.)

PECTEN MODESTUS. *Pect. testā oblongo-ovalā, æquilateralī, inæquivalvi, costis ad duodecim radiatā; valvā sinistrā planulatā, prope umbonem concavā, in valvā dextrā subimmersā, costis parvisculis, convexis, remotis, albā, maculis perpaucis purpureo-castaneis prope marginem pictā; valvā dextrā gibboso-convexā, costis latis, subquadratis, medio sulcatīs, purpurascēte-albā; auriculis æqualibus.*

THE MODEST PECTEN. Shell oblong-ovate, equilateral, inequivalve, rayed with about twelve ribs; left valve flattened, concave near the umbo, a little immersed in the right valve, ribs rather small, convex, distant, white, painted near the margin with a very few purple-chestnut blotches; right valve gibbously convex, ribs broad, somewhat square, grooved down the middle, purple-white; ears equal.

Hab. Moreton Bay, Australia.

Of a peculiar purplish-white tinge, very sparingly spotted. The ribs of the convex valve are peculiarly characterized by a single groove running down the middle.

Species 42. (Mus. Saul.)

PECTEN FILOSUS. *Pect. testā subglobosā, subæquilateralī, inæquivalvi, costis duodecim radiatā; valvā sinistrā subconcavā, in valvā dextrā immersā, costis subplanulatis, albidā, purpureo-rufo promiscuè tenuilineatā et tinctā, costis saturatioribus; valvā dextrā convexā, valde gibbosā, costis planulato-convexis, albā, lineis tenuibus rufis promiscuè pictā; auriculis æqualibus.*

THE THREAD-PAINTED PECTEN. Shell somewhat globose, nearly equilateral, inequivalve, rayed with twelve ribs; left valve slightly concave, immersed in the right valve, ribs rather flattened, whitish, promiscuously finely lineated and stained with purple-red, ribs darker; right valve convex, very gibbous, ribs rather flatly convex, white, promiscuously painted with fine red lines; ears equal.

Hab. Moreton Bay, Australia.

Another very distinct new species from Australia.

Species 43. (Mus. Cuming.)

PECTEN HASTATUS. *Pect. testā trigono-ovalā, altiore quam*

longā, æquilateralī, nisi auriculis valde inæqualibus, æquivalvi, valvis leviter convexis, sinistrā costis decem angustis spinoso-squamatis lirisque numerosis minutè squamatis radiatā, plus minus intensè roseā; valvā dextrā costis viginti minus elevatis lirisque numerosis squamatis radiatā, albidā, prope marginem roseo tinctā.

THE SPEARED PECTEN. Shell triangularly ovate, higher than long, equilateral, unless as respects the ears which are very unequal, equivalve, valves slightly convex; left valve rayed with ten narrow spine-scaled ribs, and numerous minutely scaled ridges, more or less deep pink; right valve rayed with twenty ribs, less raised, and numerous scaled ridges, white, stained with pink near the margin.

SOWERBY, Thesaurus Conch. vol. i. p. 72. pl. 20. f. 236.

Hab. —?

Of this very delicate and elaborately sculptured species two specimens are now known, one in Mr. Cuming's and one in Miss Saul's collection. A peculiarity in it worth noting is that each spine-scaled rib in the left valve is represented by two smaller ribs in the right valve, and on these the scales are less spinous.

Species 44. (Mus. Cuming.)

PECTEN MEDIUS. *Pect. testā suborbicularī, subæquilateralī, inæquivalvi, costis quatuordecim ad quindecim radiatis; valvā sinistrā planulatā, prope umbonem concavā, in valvā dextrā immersā, costis angustis, convexis, distantibus, rufo-fusco parum maculatā; valvā dextrā convexā, costis plano-convexis, levibus, albā; auriculis æqualibus.*

THE MIDDLE PECTEN. Shell orbicular, nearly equilateral, inequivalve, rayed with fourteen to fifteen ribs; left valve flattened, concave near the umbo, immersed in the right valve, ribs narrow, convex, distant, but little spotted with red-brown; right valve convex, ribs flatly convex, smooth, white; ears equal.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 130.

Hab. West Indies.

Chiefly distinguished from *P. maximus* and *Jacobæus* by the smooth polished character of the right ribs.



NASSA.

PLATE II.

Species 8. (Mus. Cuming.)

NASSA MUCRONATA. Nass. testâ ovato-conicâ, sublevis, nitidâ, longitudinaliter plicatâ, lutescente-fusco variegatâ; anfractibus rotundatis, supernè contractis, ultimo subgibbosâ; spirâ acutâ, mucronatâ; columellâ levi, callosâ, labro subincrassato, fauce sulcato.

THE POINTED NASSA. Shell ovately conical, rather smooth, shining, longitudinally plaited, variegated with yellowish-brown; whorls rounded, contracted at the upper part, last whorl rather gibbous; spire sharp, pointed; columella smooth, callous, lip rather thickened, interior grooved.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Dumaguete, Isle of Negros, Philippines (in black sand at eleven fathoms); Cuming.

The whorls of this characteristic little species are peculiarly gibbous, while the spire is raised at the apex into an unusually sharp point.

Species 9. (Mus. Cuming.)

NASSA PICTA. Nass. testâ ovato-conicâ, lævigatâ, politâ, lutescente marmoratâ, maculis castaneis hic illic pictâ, fasciâ castaneo-articulatâ ad suturas et in medio, lineisque rufescentibus æquidistantibus cinctâ; anfractibus convexis; spirâ acutâ; aperturâ parviusculâ, columellâ arcuatâ, callosâ, labro incrassato, varicoso, fauce sulcatâ.

THE PAINTED NASSA. Shell ovately conic, smooth, polished, marbled with pale yellow, painted here and there with chestnut blotches, with a chestnut-articulated band at the sutures and in the middle, and encircled with equidistant reddish lines; whorls convex; spire sharp; aperture rather small, columella arched, callous, lip thickened, varicose, interior grooved.

DUNKER, Zeitschrift für Malac. 1846, p. 172.

Hab. Philippine Islands; Cuming.

Allied in form to the preceding species, but not plicated, while it is distinguished by a characteristic style of painting.

Species 10. (Mus. Cuming.)

NASSA ELEGANS. Nass. testâ ovato-conicâ, crassiusculâ, levi, nitidâ, albicantâ, fæcis spadicosis longitudinalibus ad suturas maculatâ, plus minus obscure tinctâ.

anfractibus convexis; spirâ acuminatâ, ad apicem plicatâ; aperturâ parviusculâ, fauce sulcatâ, columellâ lamellâ expansâ corrugatâ, labro subincrassato, margine acuto.

THE ELEGANT NASSA. Shell ovately conical, rather thick, smooth, shining, whitish, more or less obscurely stained with fawn bands, which are blotches at the sutures; whorls convex; spire acuminate, plicated at the apex; aperture rather small, grooved within, columella with a wrinkled expanded lamella, lip rather thickened, sharp at the edge.

Buccinum elegans, Kiener Icon. coq. vivantes, p. 56. pl. 24. f. 97.

Hab. Indian Ocean.

A solid acuminate species, peculiarly stained with longitudinal bands, which gather into blotches at the sutures.

Fig. 11. (Mus. Cuming.)

This proves to be a light variety of *N. suturalis*, described at Sp. 4 of the preceding Plate, in which the sutural nodules are almost obsolete.

Species 12. (Mus. Cuming.)

NASSA PAPILLOSA. Nass. testâ ovato-conicâ, crassiusculâ, fulvescente, undulato-rufo sparsim tinctâ, tuberculis papillis undique regulariter obsitâ; aperturâ albâ, columellâ callosâ, labro anticâ muricato-denticulatâ.

THE PAPILLOSE NASSA. Shell ovately conical, rather thick, light fulvous, sparingly stained with burnt brown, regularly set throughout with papillose tubercles; aperture white, columella callous, lip prickly denticulated in front.

Buccinum papillonum, Linnæus, Syst. Nat. (12th edit.) p. 1200.

Hab. Philippine Islands; Cuming.

Peculiarly characterized by its strong thick-set armature of papillose tubercles.

Species 13. (Mus. Cuming.)

NASSA SPIRATA. Nass. testâ ovato-conicâ, acuminatâ, levi, nitidâ, albâ, luteo-fusco undato-maculatâ; anfractibus convexis, ad suturas angulatis, versus apicem



plicato-costellatis; aperturā parviusculā, columellā callosā, lævi, labro subincrassato, simplici.

THE SPIRED NASSA. Shell ovately conical, acuminate, smooth, shining, whitish, wave-clouded with yellowish-brown; whorls convex, angled at the sutures, plicately ribbed towards the apex; aperture rather small, columella callous, smooth, lip slightly thickened, simple.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Swan River.

The general aspect of this species reminds one of the *Eburna spirata* on a small scale.

Species 14. (Mus. Cuming.)

NASSA RUFULA. *Nass. testā orato-conicā, lævi, subventri-*

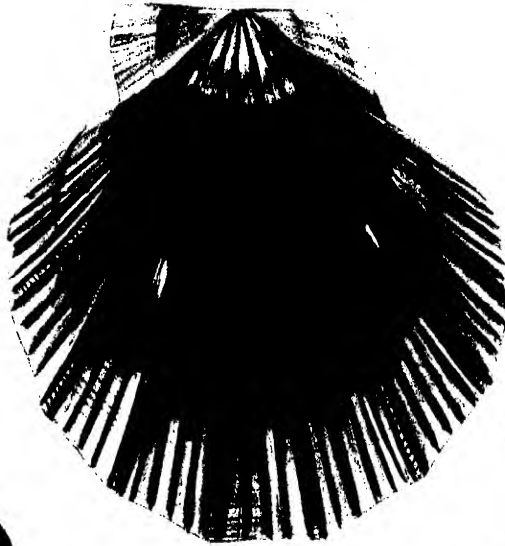
cosā, albidā, fulvo castaneoque nebulosā et strigatā, lineis rufulis tenuibus æquidistantibus cingulatā; anfractibus convexis, ultimo ad basin sulcato; columellā arcuatā, callosā, labro simplici.

THE REDDISH NASSA. Shell ovately conical, smooth, subventricose, whitish, clouded and streaked with fulvous and chestnut, and encircled with faint equidistant reddish lines; whorls convex, the last grooved at the base; columella arched, callous, lip simple.

Buccinum rufulum, Kiener, Icon. coq. vivantes, p. 89. pl. 24. f. 95.

Hab. Australia.

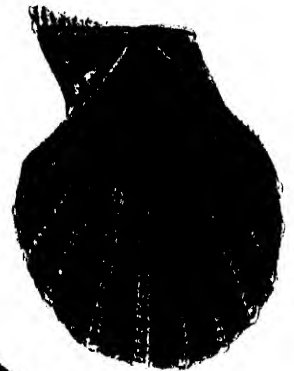
A light subinflated species, clouded with chestnut and fulvous, and neatly encircled with equidistant faint thread-like lines.



45.



46 a



46 b





PECTEN

PLATE XII.

Species 45. (Mus. Cuming.)

PECTEN BIFRONS. *Pect. testā trigono-orbiculari, æquilaterali, vix æquivalvi; valvā sinistrā convexā, costis parvis septem ad octo lirisque numerosis linearibus radiatā, interstitiis minutè granulatis, violascente, costis lirisque lævibus, intense violaceis; valvā dextrā planiore, ecosatā, liris radiatā, interstitiis undique minutè granulatis; auriculis subæqualibus.*

THE TWO-FACED PECTEN. Shell triangularly orbicular, equilateral, scarcely equivalve; left valve convex, rayed with seven to eight small ribs, and numerous linear ridges, interstices minutely granulated, violet, ribs and ridges smooth, deep violet; right valve flatter, not ribbed, rayed with ridges, the interstices being minutely granulated throughout; ears nearly equal.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 131.
Hab. Port Adelaide, South Australia.

The surface of this species, save on the ribs and ridges, is of a peculiar bloom-coloured granular shagreen character.

Species 46. (Fig. a, b, Mus. Cuming.)

PECTEN SERRATUS. *Pect. testā ovatā, paulo altiore quam longā, tenui, compressā, inæquilaterali; auriculis valde inæqualibus; inæquivalvi, valvā dextrā paulo convexiore, valvis ambabus radiatim costatis et tenuiliratis, costis ad decem, superficialiis, interdum fere obsolete, squamatis, squamis subdistantibus; cærulescente-cinereā, vel intense coccineā, lineis tenuibus albis promiscuè decussatā, costis pallidioribus.*

THE SERRATED PECTEN. Shell ovate, a little higher than

long, thin, compressed, inequilateral; ears very unequal; inequivalve, right valve a little more convex, both valves radiately ribbed and finely ridged, ribs about ten in number, superficial, sometimes almost obsolete, squamate, scales rather distant; bluish-ash, or deep scarlet, promiscuously decussated with fine white lines; ribs paler.

SOWERBY, Thesaurus Conch. vol. i. p. 69, pl. 13. f. 56.
Hab. Philippine Islands.

A very characteristic species, various in ground-colour, but curiously cross-laced with very delicate white lines.

Species 47. (Mus. Cuming.)

PECTEN JAPONICUS. *Pect. testā orbiculari, compressā, utrinque hiantē, subæquilaterali, æquivalvi; valvis extus lævibus aut tenuissimè concentricè striatis, fusco-rubente, intus liris angustis binis quatuor vel sex et quadraginta radiatā, albā, prope marginem lutescente; auriculis parvis, æqualibus.*

THE JAPAN PECTEN. Shell orbicular, compressed, gaping on each side, nearly equilateral, equivalve; valves outside smooth or very finely concentrically striated, brown-red, inside rayed with from forty-four to forty-six narrow ridges, arranged two and two, white, yellowish near the margin; ears small, equal.

Ostrea Japonica, Gmelin, Syst. Nat. p. 3317.

Pecten Japonicus, Lamarck.

Hab. Japan, China.

Closely allied to *P. pleuronectes*, but of larger and firmer growth, and not rayed in the painting.



16



17a



16b



17



17a



18b



19



20a



20b



21a

A

NASSA.

PLATE III.

Species 15. (Mus. Cuming.)

NASSA LENTIGINOSA. *Nass. testā ovato-conicā, lævi, nitidā, lutescente aut cinerascēte, lineis tenuibus rufis ringulatā, fusco undique subtilissimè lentiginosā; spirā acuminatā; anfractibus convexis, ad suturas plicato-marginatis; columellā laminā callosā corrugatā, labro intus incrassato et valdè radiatim lirato.*

THE FRECKLED NASSA. Shell ovately conical, smooth, shining, yellowish or ash, encircled with fine red lines, very finely freckled throughout with brown; spire acuminate; whorls convex, plicately margined at the sutures; columella with a callous wrinkled lamina, lip thickened inwardly, strongly radiately ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Masbate, Philippines (in sandy mud at seven fathoms); Cuming.

A dark greenish-ash species, sometimes yellowish, fine-freckled with darker colour, and encircled with faint red lines.

Species 16. (Mus. Cuming.)

NASSA SPECIOSA. *Nass. testā ovato-conicā, acuminatā, lutescente-albā, transversim liratā, liris tenuibus, confertis, granulosis, longitudinaliter plicatā, plicis supernè nodatis, nodis albis; aperturā parviusculā, albā, ad basin rufo-fusco tinctā, columellā arcuatā, labro simplici.*

THE BEAUTIFUL NASSA. Shell ovately conic, acuminate, yellowish-white, transversely ridged, ridges fine, close-set, and granuled, longitudinally plaited, plaits noded at the upper part, nodules white; aperture rather small, white, stained with reddish-brown at the base, columella arched, lip simple.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. —?

An elegant acuminate species, encircled with fine granulated ridges, while each whorl is coronated with white nodules.

Species 17. (Mus. Cuming.)

NASSA UNICOLORATA. *Nass. testā ovato-conicā, lævi, prope apicem rudè plicatā, basi sulcatā, livido-cinerascente, lineis minutis albis longitudinalibus obscurè notatā; suturis albidis; columellā arcuatā, laminā cor-*

rugatā, labro simplici, ad basin minutè denticulato, extus fortissimè varicoso.

THE ONE-COLOURED NASSA. Shell ovately conic, smooth, rudely plaited towards the apex, grooved at the base, livid-ash, obscurely marked with minute white longitudinal lines; sutures whitish; columella arched, with a wrinkled lamina, lip simple, minutely denticulated at the base, very strongly varicose without.

Buccinum unicolorum, Kiener, Icon. coq. viv. p. 60. pl. 19. f. 69.

Hab. North Australia; Jukes.

A fine solid species, closely allied to *N. olivacea*.

Species 18. (Mus. Cuming.)

NASSA CANALICULATA. *Nass. testā ovato-conicā, longitudinaliter tenniplicatā, basi sulcatā, cinereo-olivaceā, interdum pallidè castaneo-bizonatā; spirā acutā; anfractibus supernè canaliculatis, duobus infimis dorso plus minus lævibus; columellā laminā expansā subcorrugatā, labro fortiter varicoso, fauce liratā.*

THE CHANNELLED NASSA. Shell ovately conic, longitudinally finely plaited, grooved at the base, ash-olive, sometimes faintly banded with two chestnut zones; spire sharp; whorls channelled round the upper part, the two lowest whorls more or less smooth at the back; columella with a slightly wrinkled expanded lamina, lip strongly varicose, interior ridged.

Buccinum canaliculatum, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. x. p. 161.

Nassa canaliculata, Deshayes.

Hab. Philippine Islands; Cuming.

Readily distinguished from its allied species by its densely plaited sculpture, and channelled suture.

Species 19. (Mus. Cuming.)

NASSA OLIVACEA. *Nass. testā ovato-conicā, longitudinaliter plicatā, plicis in anfractibus duobus infimis eravidis, basi sulcatā; rufo-fuscescente vel olivaceā, zonulā pallidā medianā cinctā; aperturā subangustè ovatā, cærulescente-albā, columellā laminā expansā corrugatā, labro extus fortiter varicoso, intus brevilirato.*

THE OLIVE NASSA. Shell ovately conical, longitudinally



plaited, plaits in the two last whorls fading away, grooved at the base; reddish-brown or olive, encircled by a small faint central zone; aperture rather narrowly ovate, bluish-white, columella with an expanded wrinkled lamina, lip strongly varicose, short-ridged within.

Buccinum olivaceum, Bruguière Dict. No. 38.

Nassa olivacea, Deshayes.

Buccinum tania, Gmelin.

Hab. West Indies.

This well-known species varies a little in colour and robustness of form, but the difference is not material.

Species 20. (Fig. *a, b, c*, Mus. Cuming.)

NASSA CORONATA. *Nass. testā ovatā, subventricosā, dorso lævigatā, nitente, albā vel olivaceā, vel castaneā, medio*

zonatā; spirā acutā, prope apicem plicatā; anfractibus subrotundatis, supernè tuberculato-nodatis; aperturā subamplā, columellā arcuatā, callosā, labro subvaricoso, margine denticulato, fauce tenuiliratā.

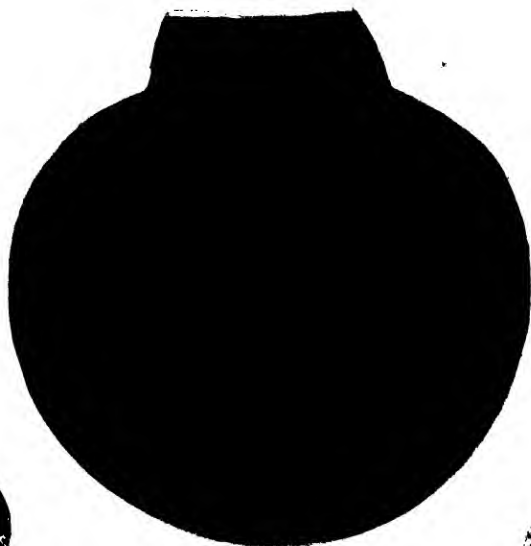
THE CORONATED NASSA. Shell ovate, subventricose, smooth at the back, shining, white or olive or chestnut, zoned in the middle; spire sharp, plaited near the apex; whorls somewhat rounded, tubercularly noduled at the upper part; aperture rather large, columella arched, callous, lip slightly varicose, denticulated at the edge, interior finely ridged.

Buccinum coronatum, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. x. p. 180.

Nassa coronata, Deshayes.

Hab. Madagascar.

In the dark varieties of this species the band is light, and in the light varieties it is dark.



48.



49.



50.



51.



PECTEN

PLATE XIII

Species 48. (Mus. Cuming.)

PECTEN PLEURONECTES. *Pect. testā suborbiculari, aequilateriali, tenuiculā, aequivalvā, laevi, compressā, utrinque subliante, auriculis aequalibus, parvis, obtusis, interne costis duodecim duplicatis, vel quatuor et viginti singulis radiatā; valvā sinistrā livido-fulvā aut purpurascēte, lineis tenuibus radiatā, dextrā albā.*

THE RIB-RAYED PECTEN. Shell nearly orbicular, equilateral, rather thin, equivalve, smooth, compressed, a little gaping on each side, auricles equal, small, obtuse, rayed internally with twelve pairs of ribs or twenty-four single ones; left valve livid-fulvous or purplish, rayed with fine lines, right valve white.

Ostrea pleuronectes, Linnæus, Syst. Nat. (12th edit.) p. 1145.

Pecten pleuronectes, Lamarck.

Hab. China.

Chiefly distinguished from *P. Japonicus* by its smaller size, and line-rayed painting.

Species 49. (Mus. Cuming.)

PECTEN DISTANS. *Pect. testā subaltiore quam longā, subaequalvi, aequilaterali, auriculis subgrandibus; valvis decentiostatis, costis sulcisque amplis, prominentibus, tremuliratis, valvā sinistrā ustulato-nigricante, albo-maculato, dextrā albā vel lutescente tinclā.*

THE DISTANT PECTEN. Shell rather higher than long, nearly equivalve, equilateral, auricles rather large; valves ten-ribbed, ribs and grooves large, prominent, finely-ridged, left valve burnt-black, marbled with white, right valve white or yellowish.

Lamarck, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 139.

Hab. Philippines Islands; Cuming.

A strongly-developed species, with the ribs and interstices in both valves of about the same width.

50. (Mus. Cuming.)

PECTEN SULCATUS. *Pect. testā suborbiculari, tenuiculā, aequivalvā, subaequilateralī; valvis decemcostatis, costis latiusculis, parum elevatis, sulcisque tremuliratis, valvā sinistrā cinereo-fulvā, punctis nigris aspersā, dextrā lutescente, umbonem versus fusco-punctatā.*

TEN-GROOVED PECTEN. Shell nearly orbicular, rather thin, equivalve, nearly equilateral; valves ten-ribbed, ribs rather broad, but little raised, with the grooves finely ridged, left valve ash-fulvous, sprinkled with black dots, right valve yellowish, brown-dotted towards the umbo.

Born, Mus. Cas. Vindobonensis, pl. 6. f. 3.

Hab. Mediterranean.

This is doubtless the same species as Lamarck's *P. sulcatus*, though he has omitted any reference to Born. It approximates hard upon *P. glaber*.

Species 51. (Mus. Cuming.)

PECTEN MAGELLANICUS. *Pect. testā orbiculari, subaequilateralī, paululum hiantē, inequivalvi, sinistrā convexā, tumidiusculā, purpurascēte-rubrā, dextrā multo planiore, albidā, ambabus creberrimē radiatim scabro-striatis, umbonibus violaceis.*

THE MAGELLAN PECTEN. Shell orbicular, nearly equilateral, a little gaping, inequivalve, left valve convex, rather swollen, purple-red, right valve much flatter, whitish, both very closely radiately rough-striated, umbones violet.

Ostrea Magellanica, Gmelin, Syst. Nat. p. 3317.

Pecten Magellanicus, Lamarck.

Hab. Banks of Newfoundland.

The name of this species, suggested by a wrong locality, should be changed, were there not considerations on the subject of nomenclature which forbid it.



21a



22



22b



23



24a



25b



25a



26a



26b



27b



NASSA.

PLATE IV.

Species 21. (Mus. Cuming.)

NASSA SCALARIS. *Nass. testā ovato-turritā, pallidā, rufo-fusco subfasciatā; spirā exsertā, acuminatā, suturā impressā; anfractibus longitudinaliter dense costatis, costis ad suturas nodulatis, interstitiis creberrimè cancellatis; aperturā parviusculā, columellā laminā expansā subcorrugatā, labro simplici, fauce valdè lirātā.*

THE LADDER-LIKE NASSA. Shell ovately turreted, pale, obscurely banded with reddish-brown; spire exserted, acuminate, suture impressed; whorls longitudinally densely ribbed, ribs noduled at the sutures, interstices very closely cancellated; aperture rather small, columella with a slightly wrinkled expanded lamina, lip simple, interior strongly ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Corrigidor, Philippines (in coarse sand at seven fathoms); Cuming.

An elegantly sculptured shell, resembling *Scalaria* in general aspect.

Species 22. (Mus. Cuming.)

NASSA PULLA. *Nass. testā ovatā, plicis subrudibus longitudinalibus, sulcis transversis dense decussatā, cinereo-carulescente, interdum albizonatā; anfractibus supernè angulatis, ad angulum nodatis; columellā arcuatā, laminā lati-expansā callosā orbiculari, fauce lirātā.*

THE YOUNG NASSA. Shell ovate, decussated with rude longitudinal plaits and transverse grooves, ash-blue, sometimes white-zoned; whorls angled at the upper part, noduled on the angle; columella arched, with a large wide-spread orbicular callous lamina, interior ridged.

Buccinum pullus, Linnæus, Syst. Nat. (12th edit.) p. 1201.

Nassa pulla, Deshayes.

Hab. Philippine Islands; Cuming.

A solid greenish-ash shell, with a pale central band.

Species 23. (Mus. Cuming.)

NASSA NODIFERA. *Nass. testā ovato-conicā, cinereo-albescente, rufo-fusco sparsim maculatā, longitudinaliter costatā; anfractibus convexis, costis callotis, nitentibus, ad suturas subnodosis; aperturā ovatā, columellā arcuatā, laminā expansā, callosā, fauce valdè lirātā.*

THE NODIFEROUS NASSA. Shell ovately conical, ash-white, spotted here and there with red-brown, longitudinally ribbed; whorls convex, ribs callous, shining, subnodose at the sutures; aperture ovate, columella arched, with an expanded callous lamina, interior strongly ridged.

POWIS, Pro. Zool. Soc. 1835, p. 95.

Hab. Galapagos Islands and Panama (in coral sand at from six to ten fathoms); Cuming.

The ribs of this species have a peculiar shining enamel-like appearance.

Species 24. (Mus. Cuming.)

NASSA SULCIFERA. *Nass. testā ovato-ventricosā, cinerascēte, albifasciatā, longitudinaliter subplicatā, transversim lirātā; spirā productā, acutā; anfractibus convexis, supernè angulatis, ultimo sulco subamplo infra suturam; columellā arcuatā, callo supernè expanso, fauce lirātā.*

THE GROOVED NASSA. Shell ovately ventricose, ash, white-banded, longitudinally subplicated, transversely ridged; spire produced, sharp; whorls convex, angled at the upper part, last whorl with a rather large groove beneath the suture; columella arched, with a spreading callosity above, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Algoa Bay.

Somewhat ventricose in form with only faint indications of longitudinal plaits.

Species 25. (Fig. a, b, Mus. Cuming.)

NASSA ARCLARIA. *Nass. testā ovatā, ventricosā, crassā, cinereā vel olivaceā, zonulā albā cingulatā, prope apicē plicatā, inde lævigatā, nitente, ad basin sulcatā; spirā acutā, anfractibus supernè angulatis, ad angulum tuberculato-nodatis; columellā arcuatā, interdum callo latè expanso erecto orbiculari, fauce lirātā.*

THE LITTLE BOX NASSA. Shell ovate, ventricose, thick, ash or olive, encircled with a white zone, plicated near the apex, then smooth and shining, grooved at the base; spire sharp; whorls angled at the upper part, tubercularly noduled at the angle; columella arched, sometimes with a broadly expanded erect orbicular callosity, interior ridged.

Buccinum arcularia, Linnæus, Syst. Nat. (12th edit.) p. 1200.

Nassa arcularia, Lamarck.

Hab. Philippine Islands; Cuming.

This well-known species is perhaps the most strongly tubercled of the genus.

Species 26. (Mus. Cuming.)

NASSA CREMATA. *Nass. testâ ovato-conicâ, liris longitudinalibus et transversis undique dense cancellatâ, cinereo-olivaceâ, fusco partim tinctâ; spirâ subcanaliculatâ, suturâ impressâ; aperturâ parviusculâ, colu-*

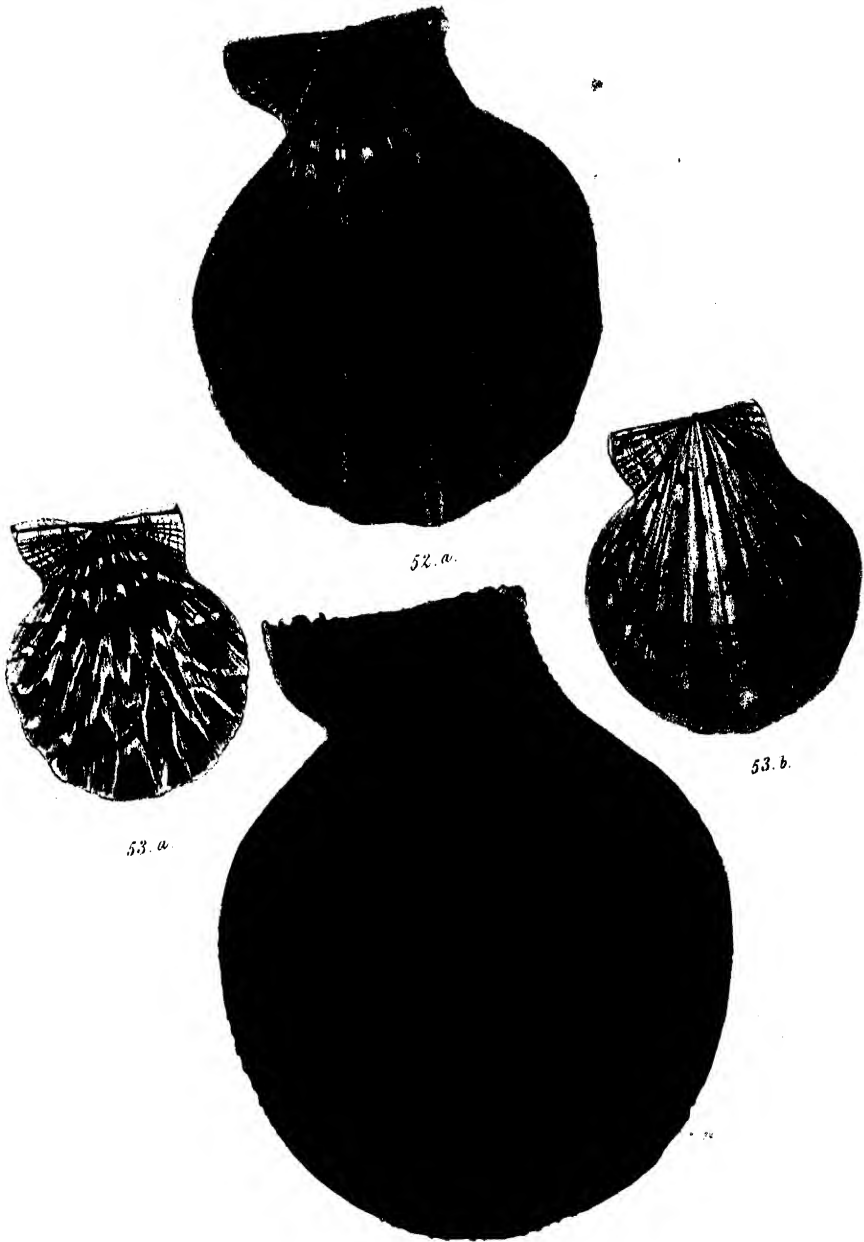
mellâ arcuatâ, lamina tennicorrugatâ, labro muricato-denticulato.

THE BURNED NASSA. Shell ovately conical, densely cancellated throughout with longitudinal and transverse ridges, ash-olive, partially stained with brown; spire subchannelled, suture impressed; aperture rather small, columella arched, with a finely wrinkled lamina, lip prickly denticled.

HINDS, Moll. Voy. Sulphur, pl. 9. f. 8 and 9.

Hab. Straits of Malacca.

A rather solid species, densely crossed-ridged throughout, with somewhat the aspect of a *Cancellaria*.





PECTEN.

PLATE XIV.

Species 52. (Fig. *a, b*, Mus. Cuning.)

PECTEN ISLANDICUS. *Pect. testā ovali, subaltiore quam longā, inequilaterali, subaequali, nunc compressā, nunc tumidiusculā, liris numerosis squamulatis, interdum prope marginem duplicatis, densē radiatā, interdum obsolete rudē costatā; valvā sinistrā plus minus intense purpureā vel fulvo-ruhidā, dextrā pallidiore; auriculis valde inaequalibus.*

THE ICELAND PECTEN. Shell oval, rather higher than long, inequilateral, nearly equi-*valve*, now compressed, now rather swollen, thickly radiated with squamulate ridges, which are sometimes duplicate near the margin, sometimes obsoletely rudely ribbed; left valve more or less deep purple or fulvous-red, right valve paler; auricles very unequal.

Ostrea Islandica, Müller, Zoologia Danica, prod. No. 2990.

Pecten Islandicus, Chemnitz.

Ostrea cinnabarina, Born.

Hab. Northern Seas.

This well-known northern species varies extremely. The specimen represented at Fig. 52 *a*, which is swollen and ribbed, with the ridges rather sharply squamulate, is from Greenland. That at Fig. 52 *b*, which is the more common state of the species, is from Iceland.

Species 53. (Fig. *a, b*, Mus. Cuning.)

PECTEN GLABER. *Pect. testā orbiculari, aequilaterali, auriculis subgrandibus, aequali, decemcostatā et striatā, costis subdistantibus, alternis sepe minus prominentibus; valvā sinistrā cinereā, nigro alboque variegatā, aut luteā, aut variā, dextrā pallidiore, umbonem versus fusco-punctatā.*

THE SMOOTH PECTEN. Shell orbicular, equilateral, auricles rather large, equi-*valve*, ten-ribbed and striated, ribs rather distant, the alternate ribs often less prominent; left valve ash-colour, variegated with black and white, or yellow, or various, right valve paler, dotted with brown towards the umboes.

Ostrea glabra, Linnaeus, Syst. Nat. p. 1146.

Pecten glaber, Chemnitz.

Pecten flavidulus, griseus, and *virgo*, Lamarck.

Ostrea citrina and *rustica*, Poli.

Are varieties? *Ostrea lutea, flavescens, aurantia, modesta*, and *depressa*, Gmelin.

Hab. Mediterranean.

Extremely variable in colouring, but differing little in sculpture, and not at all in form.



329



330



331



332



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338

NASSA.

PLATE V.

Species 27. (Mus. Cuming.)

NASSA PAUPERATA. *Nass. testā ovatā, ventricosā, longitudinaliter granoso-plicatā, granis fortioribus juxta suturas, albā, luteo-castaneo interrupte fasciatā; anfractu ultimo dorso sublaevigato, nilente; aperturā parviusculā, labro varicoso, fauce striatā.*

THE IMPOVERISHED NASSA. Shell ovate, ventricose, longitudinally granosely plaited, grains stronger next the sutures; white, interruptedly banded with yellowish chestnut; last whorl rather smooth at the back, and shining; aperture rather small, lip varicose, interior striated.

Buccinum pauperatum, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. 10. p. 183.

Hab. Australia.

There is no up-raised callosity in this species, although some specimens may have a thicker deposit of enamel about the columella than others.

Species 28. (Mus. Cuming.)

NASSA RETECOSA. *Nass. testā ovatā, acuminatā, rufescente-cinerea; spirā acutā, suturā impressā; anfractibus convexis, undique dense granoso-reticulatis, granis parviusculis, prominentibus; columellā corrugatā; laminā tenuiculā expansā, aperturā superne sinuatā, fauce liratā.*

THE NETTED NASSA. Shell ovate, acuminate, reddish-ash; spire sharp, suture impressed; whorls convex, densely granosely reticulated, grains rather small, but prominent; columella wrinkled, with a rather thin expanded lamina, aperture sinuated at the upper part, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Albay, Island of Luzon, Philippines, on coarse sand at six fathoms; Cuming.

Closely allied to *N. cremata*, which scarcely differs except in having the suture angularly channelled.

Species 29. (Mus. Cuming.)

NASSA GEMMULATA. *Nass. testā ovatā, ventricosā, longitudinaliter granoso-plicatā, granis tumidis, verrucosis, lutescente-albā, fuscescente tinctā et promiscue maculatā; spirā breviusculā, acutā, suturā plano-canalicu-*

latā; anfractu ultimo multo majore, rotundato; columellā granoso-laminatā, fauce valde liratā.

THE JEWELLED NASSA. Shell ovate, ventricose, longitudinally granosely plaited, grains swollen, warty; yellowish-white, stained and promiscuously spotted with light brown; spire rather short, sharp, suture flatly channelled; last whorl much the largest, rounded; columella granosely laminated, interior strongly ridged.

Buccinum gemmulatum, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. 10. p. 169.

Nassa gemmulata, Deshayes.

Hab. Philippine Islands; Cuming.

A rounded bulbous-like species, densely wart-grained throughout.

Species 30. (Mus. Cuming.)

NASSA CUMINGII. *Nass. testā ovatā, subventricosā, solidā, subpellucido-albā, rufo-fuscescente promiscue tinctā, granis verrucosis undique densissime seriatim sculptā; spirā subacutā, suturā plano-canaliculatā; aperturā parviusculā, columellā granoso-laminatā, fauce valde liratā.*

CUMING'S NASSA. Shell ovate, rather ventricose, solid, subtransparent white, stained promiscuously with faint reddish-brown, very densely sculptured throughout with rows of warty granules; spire rather sharp, suture flatly channelled; aperture rather small, columella granosely laminated, interior strongly ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

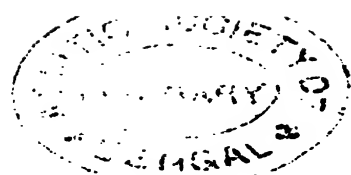
Hab. China.

An elegant subtransparent-looking shell, though solid, very densely regularly set throughout with small warty granules.

Species 31. (Mus. Cuming.)

NASSA STOLIDA. *Nass. testā ovato-conicā, subpyramidalī, crassā, solidissimā, cærulescente-cinerea, fusco luteoque tinctā et maculatā; anfractibus plano-declivibus, superne subidentatis et rude irregulariter plicatis, interstitiis obscure tunicancellatis; aperturā parvā, columellā valde callosā, callonitate breviter recurvā, labro simplici, fauce laevigatā, purpureo-fusca.*

THE HEAVY NASSA. Shell ovately conical, somewhat



pyramidal, thick, very solid, bluish-ash, sparingly stained and blotched with yellow and brown; whorls flatly slanting, slightly indented and rudely irregularly plaited round the upper part, interstices obscurely finely cancellated; aperture small, columella very callous, callosity shortly recurved, lip simple, interior smooth, purple-brown.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. — ?

A heavy solid species of a peculiar pyramidal form, very rudely and irregularly sculptured.

Species 32. (Mus. Cuming.)

NASSA DISTORTA. *Nass. testā acuminato-conicā, solidā, cærulescente-cinereā, luteo fuscoque plus minus tinctā et obsoletè fasciatā; spirā elevatā, anfractibus juxta suturas subcontractis, granatis, deinde tenuiplicatis; aperturā parvā, columellā densè callosā, labro simplici, fauce tenuiliratā.*

THE DISTORTED NASSA. Shell acuminate conical, solid, bluish-ash, more or less stained and obsoletely banded with yellow and brown; spire raised, whorls slightly contracted and granuled next the sutures, then thinly plaited; aperture small, columella thickly callous, lip simple, interior thinly ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. — ?

Of the same peculiar type as the preceding species, distinguished by a delicate sculpture of thin longitudinal plaits, with a granule corresponding to each next the sutures.

Species 33. (Mus. Cuming.)

NASSA ORNATA. *Nass. testā ovato-conicā, basi sulcatā et contortā, spirā acutā, luteo-albā, violascente-rufa latizonatā; anfractibus convexis, longitudinaliter concentricè tuberculato-plicatis, interstitiis striato-cancellatis; aperturā parviusculā, tenuè corrugato-laminatā, labro crassissimè varicoso, fauce breviliratā.*

THE ORNATE NASSA. Shell ovately conical, grooved and twisted at the base, spire sharp, yellowish-white, broad-zoned with violet-red; whorls convex, longitudinally concentrically tubercle-plaited, interstices striately cancellated; aperture rather small, thinly wrinkled laminated, lip very thickly varicose, interior short-ridged.

KIENER, Icon. coq. vivantes, p. 80. pl. 21. f. 83.

Hab. Ceylon.

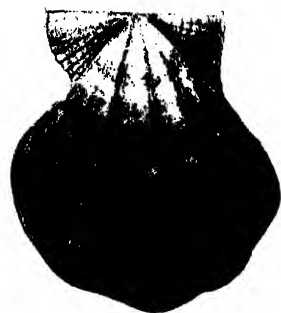
A characteristic species, belonging to the group of the genus bordering on *Trilon*.



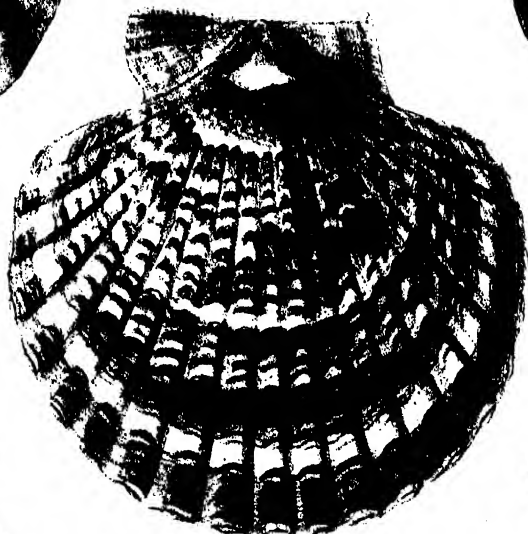
54. a



55. a.



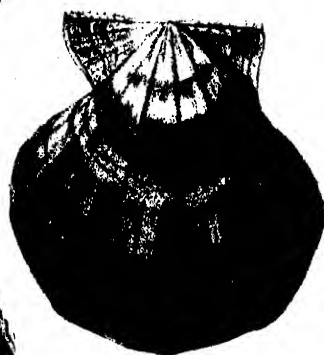
55. b



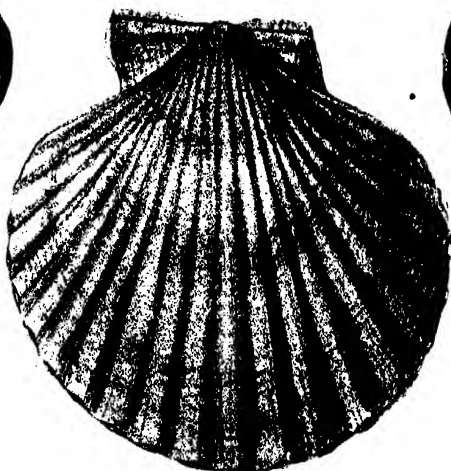
54. b



55. c



55. d.



54. c.

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PECTEN.

PLATE XV.

Species 54. (Fig. a, b, c, Mus. Cuming.)

PECTEN OPERCULARIS. *Pect. testā orbiculari, aequali, subaequali, ventricosā, octocostatā et striatā, striis interdum scabrosis, albidā rufō variegatā, aut lutescente, aut intense purpureā, valvā dextrā pallidiore; auriculis subaequalibus.*

THE OPERCULAR PECTEN. Shell orbicular, equilateral, nearly equivalve, ventricose, eight-ribbed and striated, striae sometimes scabrous, whitish, variegated with red, or yellowish, or deep purple, right valve paler; auricles nearly equal.

Ostrea opercularis, Linnaeus, Syst. Nat. (12th edit.) p. 1147.

Ostrea dubia, elegans, versicolor, radiata, and regia, Gmelin.

Hab. Seas of Europe.

The three specimens here figured of this well-known species represent the extreme variations of colour.

Species 55. (Fig. a to d, Mus. Cuming.)

PECTEN PROTEUS. *Pect. testā subquadrato-orbiculari, tenuiculā, aequali, subaequali, quincostatā et striatā, costis tumidiusculis, parum elevatis, remotis, griseā albo variegatā, aut luteā, aut rufā, aut violaceā, valvā dextrā pallidiore, fusco interdum punctatā; auriculis subaequalibus.*

THE PROTEAN PECTEN. Shell somewhat quadrately orbicular, rather thin, equilateral, nearly equivalve, five-ribbed and striated, ribs rather swollen, but little raised, distant, grey, variegated with white, or yellow, or red, or violet, right valve paler, sometimes dotted with brown; auricles nearly equal.

SOLANDER, Sowerby, Thesaurus Conch. vol. i. p. 59.

Pecten discors, seu disconveniens, Chemnitz.

Hab. Mediterranean.

Though closely allied to *P. glaber*, these have nevertheless a distinctive character, especially in being thin and only five-ribbed.

February, 1853.



27.



28.



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31.



32.



33.



34.



35.



36.

NASSA.

PLATE VI.

Species 34. (Mus. Cuming.)

NASSA ANGULIFERA. *Nass. testā ovato-conicā, subturritā, fulvescente, rufo-fasciatā; anfractibus convexis, supernè angulatis, longitudinaliter plicatis, interstitiis striato-cancellatis; aperturā parviusculā, columellā brevilaminatā, labro simplici, varicoso.*

THE ANGLED NASSA. Shell ovately conic; subturreted, light fulvous, banded with red; whorls convex, angled at the upper part, longitudinally plaited, interstices striately cancellated; aperture rather small; columella short-laminated, lip simple, varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Galapagos Islands (at ten fathoms); Cuming.

A small species, allied to the *Triton*-like division of the genus, distinguished by the angular contour of the whorls round the upper part.

Species 35. (Mus. Cuming.)

NASSA FILOSA. *Nass. testā ovali, suboblique productā, crassā, politā, nilente, cinereo-olivaceā, albilentiginosā, fasciis subobscuris duabus lineisque distantibus rufis cingulatā; spirā brevi, acutā; anfractibus convexis, suboblique declivibus; aperturā parvā, columellā labroque densè callosa, labro lutescente, immaculatā.*

THE THREADED NASSA. Shell ovate, somewhat obliquely produced, thick, polished, shining, ash-olive, freckled with white, and encircled with distant red lines, and two obscure reddish bands; spire short, sharp; whorls convex, rather obliquely slanting; aperture small, columella and lip thickly callous, lip yellowish, unspotted.

GRAY, Brit. Mus.

Hab. Cagayan, Island of Mindanao, Philippines (in sandy mud at twenty-five fathoms); Cuming.

A very characteristic, shining, enamelled species, resembling *Cyllene* in form.

Species 36. (Mus. Cuming.)

NASSA VERRUCOSA. *Nass. testā acuminato-ovalī; spirā acutā, suturā plano-cangliculatā; undique seriatim granosā, granis tumidis, peramplius verrucosis, lutescente, rufo-fusco sparsim nebuloso; aperturā parvā, columellā laminā corrugatā tenui expansā, faucē liratā.*

THE WARTY NASSA. Shell acuminate ovate; spire

sharp, flatly channelled at the suture; everywhere seriatly granuled, granules swollen, very largely warty; yellowish, sparingly clouded with reddish-brown; aperture small, columella with a thin expanded wrinkled lamina, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Dalaguete, Island of Negros, Philippines (at eleven fathoms); Cuming.

Allied to *N. gemmulata* of the preceding plate, but the granules are larger and more decidedly warty.

Species 37. (Mus. Cuming.)

NASSA HISPIDA. *Nass. testā ovato-conicā, solidiusculā, albā, fasciā indistinctā olivaceā notatā; spirā acutā; anfractibus plano-convexis, undique fortiter seriatim muricato-granosis, serie supernā distantiore et prominente; aperturā parvā, columellā excavatā, basi contortā, labro simplici.*

THE PRICKLY NASSA. Shell ovately conical, rather solid, white, marked with an indistinct olive band; spire sharp; whorls flatly convex, strongly seriatly prickly grained throughout, the uppermost row being rather more distant than the rest, and prominent; aperture small, columella excavated, twisted at the base, lip simple.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Loon, Island of Bohol, Philippines (on the reefs at low water); Cuming.

A prominently prickly sculptured species, chaste in colouring and elegant in form.

Species 38. (Mus. Cuming.)

NASSA MONILE. *Nass. testā ovato-oblongā, lævi, nitidā, albidā, fasciis roseo-olivaceis luteoque tinotā; anfractibus plano-convexis, supernè indentatis et granatis, deinde flexuoso-plicatis, basi sulcatis; aperturā parviusculā, columellā labroque callosis, faucē liratā.*

THE NECKLACE NASSA. Shell ovately oblong, smooth, shining, whitish, stained with rose-olive bands and yellow; whorls flatly convex, indented and grained at the upper part, then flexuously plaited, grooved at the base; aperture rather small, lip and columella callous, interior ridged.

Buccinum monile, Kiener, Icon. coq. vivantes, p. 68. pl. 11. f. 40.

Hab. Philippine Islands; Cuming.

A fine solid species, longitudinally wave-plaited throughout, with a characteristic groove beneath the sutures.

Species 39. (Mus. Cuming.)

NASSA CANDENS. *Nass. testā acuminato-ovatā, solidiusculā, albidā, fuscescente sparsim tinctā; spirā acutissimā, suturā angustā canaliculatā; anfractibus plano-convexis, granato-reticulatis, granis prominentibus, submuricatis, interstitiis pulcherrimè elevato-lineatis; aperturā parvā, columellā excavatā, corrugatā, callositate orbiculari erectā, fauce liratā.*

THE GLISTENING NASSA. Shell acuminate-ovate, rather solid, whitish, sparingly stained with light brown; spire very sharp, narrowly channelled at the suture; whorls flatly convex, granately reticulated, grains prominent, rather prickly, interstices very beautifully elevatedly lineated; aperture small, columella excavated, wrinkled, with an erect orbicular callosity, interior ridged.

HINDS, Moll. Voy. Sulphur, pl. 9, f. 6 and 7.

Hab. Marquesas Islands; Hinds.

One of the most elaborately sculptured species of the genus, with an erect shining callosity at the aperture.

Species 40. (Mus. Cuming.)

NASSA FASCIATA. *Nass. testā ovato-conicā, subfusiformi, albā, rufo-fusco conspicuè bifasciatā, undique serialim granatā, granis prominentibus, obtusis; aperturā parviusculā, columellā labroque breviliratis.*

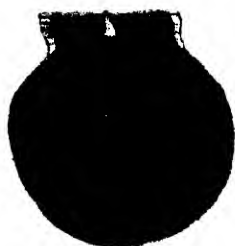
THE BANDED NASSA. Shell ovately conical, subfusiform, white, conspicuously two-banded with red-brown, serially grained throughout, grains prominent, obtuse, aperture rather small, lip and columella short-ridged.

Buccinum fasciatum, Quoy and Gaimard, Moll. Voy. de l'Astrolabe, vol. ii. p. 445. pl. 32. f. 18 to 21.

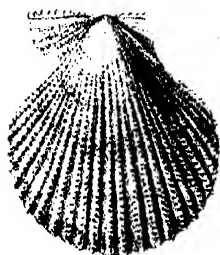
Nassa fasciata, Deshayes.

Hab. South Australia.

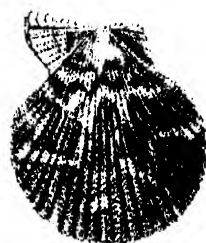
A white, obtusely grained shell, very conspicuously banded with red-brown.



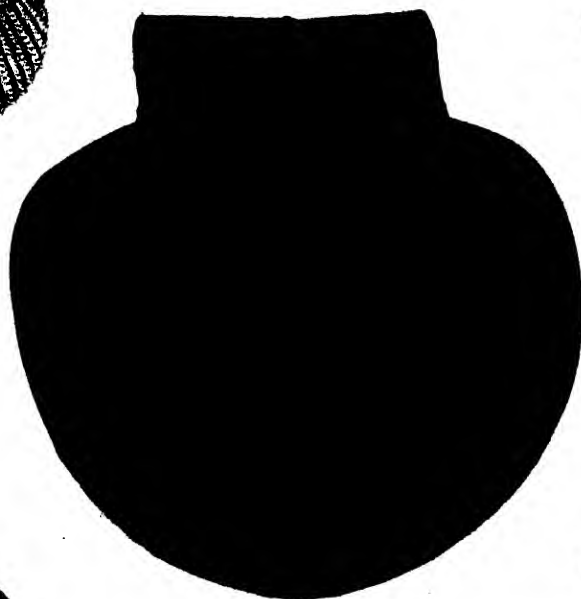
56.



57. a



57. b



58.



59.



60.



61.

PECTEN.

PLATE XVI.

Species 56. (Mus. Cuming.)

PECTEN PSEUDAMUSIUM. *Pect. testā rotundatā, tenui, compressā, subaequaliterali, aequivalvi, valvā sinistrā radiatim striatā, livido-cinereā, rufo-fusco et fulvo maculatā, valvā dextrā concentricē striatā pallidiore.*

THE FALSE-COMPASS PECTEN. Shell rounded, thin, compressed, nearly equilateral, equivalve, left valve radiately striated, livid-ash colour, blotched with fulvous and red-brown, right valve concentrically striated, paler.

KLEIN, Meth. Ost. p. 134. pl. 9. f. 31.

Pecten exoticus, Chemnitz.

Ostrea hybrida, Gmelin.

Hab. West Africa.

The left valve of this species is striated radiately, and the right valve concentrically.

Species 57. (Fig. a, b, Mus. Cuming.)

PECTEN PSEUDO-LIMA. *Pect. testā suborbiculari, inequilaterali, auriculis valde inequalibus, aequivalvi, subventricosā, radiatim crebricostatā, costis septem et viginti, hic illic sublatis, ubique acutē squamatis; aurantiā, alio umbones versus maculatā, interdum luteā.*

THE FALSE-FILE PECTEN. Shell nearly orbicular, inequilateral, ears very unequal, equivalve, a little ventricose, radiately closely ribbed, ribs seven-and-twenty in number, here and there slightly ridged, everywhere sharply scaled; orange, spotted towards the umboes with white, sometimes yellow.

SOWERBY, Thesaurus Conch. vol. i. p. 78. pl. 20. f. 235.

Hab. Jacin, Island of Bohol, Philippines; Cuming.

A delicately-coloured species, rayed with numerous close-set, sharply-scaled ribs.

Species 58. (Mus. Cuming.)

PECTEN LAURENTII. *Pect. testā suborbiculari, aequilateralī, tenuiculā, valde inequivalvi, valvā sinistrā planatā, subflexuosā, radiatim striatā, purpureo-rufā, dextrā convexā, albidā, purpurascente pallidē radiatā, intus tenuicostatā, costis ad quadraginti, binis.*

LAURENCE'S PECTEN. Shell nearly orbicular, equilateral, rather thin, very inequivalve, left valve flattened, rather flexuous, radiately striated, purple-red, right valve convex, whitish, faintly rayed with light purple, finely ribbed within, ribs about forty, disposed in pairs.

GMELIN, Syst. Nat. p. 3317.

Hab. China.

Allied to *P. sicac*, but well distinguished by its thinner and subflexuous structure, as well as in colouring.

Species 59. (Mus. Cuming.)

PECTEN LUCULENTA. *Pect. testā subtrigonā, altiore quam longā, subcompressā, inequilateralī, auriculis valde inequalibus, aequivalvi, radiatim liratā, et decemcostatā, costis subacutis, irregularibus, aureo-lutescente, nigricante-fusco in sulcis profusē punctatā.*

THE BRIGHT PECTEN. Shell somewhat triangular, higher than long, rather compressed, inequilateral, ears very unequal, equivalve, radiately ridged and ten-ribbed, ribs rather sharp, irregular, golden-yellow, profusely dotted within the grooves with blackish-brown.

Hab. Bathurst Island, North Australia.

This pretty species from Australia is nearest allied to *P. pes-felis* and *tigris*.

Species 60. (Mus. Cuming.)

PECTEN MUSCOSUS. *Pect. testā subgloboasă, aequilateralī, auriculis subelongato-productis, aequivalvi, valvis ventricosā, octodecimcostatis, costis sulcisque densē minutē scabrosis, costis squamis erectis medio subirregulariter armatis; fulvo-rufā.*

THE MOSSY PECTEN. Shell somewhat globose, equilateral, auricles rather elongately produced, equivalve, valves ventricose, eighteen-ribbed, ribs and grooves thickly minutely scabrous, somewhat irregularly armed down the middle with erect scales; fulvous-red.

WOOD, Index Testaceologicus, Supp. pl. 2. f. 2.

Hab. — ?

This appears to be a very good species. Both valves are alike, globosely ventricose, and prominently scaled.

Species 61. (Mus. Cuming.)

PECTEN FLEXUOSUS. *Pect. testā flabellatim rotundatā, plus minus ventricosā, aequilateralī, subaequivalvi, valvis radiatim striatis, sinistrā decemcostatā, costis alternatim majoribus, funeo-albidā, nigro-fusco promiscuē maculatā, dextrā decemcostatā, costis binis, aequalibus, albidā, sparsim punctatā.*

THE FLEXUOUS PECTEN. Shell fan-like rounded, more or less ventricose, equilateral, nearly equivalve, valves radiately striated, left valve ten-ribbed, ribs alternately larger, smoky-white, promiscuously blotched with black-brown, right valve ten-ribbed, ribs equal, disposed in pairs.

Ostrea flexuosa, Poli.

Pecten Isabella, Lamarck.

Hab. Mediterranean.

Allied to *P. glaber*, of the same locality.



NASSA.

PLATE VII.

Species 41. (Mus. Cuming.)

NASSA NODATA. *Nass. testā subfusiformi-ovata, crassa, lutescente, basin versus nigricante bifasciatā, longitudinaliter plicato-costatā, transversim liratā, liris filiformibus, costas super nodatis; aperturā parviusculā, columellā brevilaminatā, labro simplici, fortiter varicoso, fauce breviliratā.*

THE KNOTTED NASSA. Shell somewhat fusiformly ovate, thick, yellowish, two-banded with faint black towards the base, longitudinally plicately ribbed, transversely ridged, ridges thread-like, knotted on the ribs; aperture rather small, columella short-laminated, lip simple, strongly varicose, interior short-ridged.

HINDS, Moll. Voy. Sulphur, pl. 9. f. 14, 15.

Hab. Straits of Malacca.

A solid ribbed species, encircled with fine thread-like ridges, which are knotted on crossing the ribs.

Species 42. (Mus. Cuming.)

NASSA STIGMARIA. *Nass. testā ovato-ventricosā, rufescente, albo-fuscoque variegatā et punctatā, transversim et longitudinaliter incisā, granis intermediis convexo-planis, quadratis; columellā callosā, basi corrugatā, labro simplici, fauce liratā.*

THE MARKED NASSA. Shell ovately ventricose, reddish, variegated and dotted with white and brown, transversely and longitudinally engraved, intermediate grains convexly flattened and square; columella callous, wrinkled at the base, lip simple, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Siquijor, Philippines (under stones); Cuming.

A curious square-grained species, the sutural row of grains being rather swollen and plaited.

Species 43. (Mus. Cuming.)

NASSA MARGINULATA. *Nass. testā ovato-acutā, longitudinaliter plicatā, sulcis linearibus transversis decussatā, subgranulosā; albidā, olivaceo, fusco et rufo tinctā et fasciatā; anfractuum margine superiori crassiusculā, crenulatā; columellā caris callosā, labro incrassato, fauce liratā.*

THE MARGINED NASSA. Shell ovately acute, longitudinally plaited, decussated with transverse linear grooves, subgranulose; whitish, stained and banded with olive, brown, and red; upper edge of the whorls rather thick and crenulated; columella variously callous, lip thickened, interior ridged.

Buccinum marginulatum, Lamarck, Anim. sans vert. (Deshayes' edit.) vol. 10. p. 182.

Hab. Mediterranean.

There is mostly a very characteristic brown groove below the sutures.

Species 44. (Mus. Cuming.)

NASSA VENUSTA. *Nass. testā ovato-acutā, crassā, dorso gibbosā, albidā, cæruleo lividoque fasciatā, punctis fuscis bivittatā, longitudinaliter plicatā, plicis tenuibus, flexuosis, subirregularibus, liris subtilibus transversis cancellatā; spirā breviusculā, acutā; columellā labroque densè callosis, aperturā parvā, fauce liratā.*

THE HANDSOME NASSA. Shell ovately acute, thick, gibbous at the back, whitish, banded with blue and livid, two-filleted with brown dots, longitudinally plaited, plaits thin, flexuous, rather irregular, cancellated with fine transverse ridges; spire rather short, sharp; lip and columella thickly callous, aperture small, interior ridged.

Buccinum venustum, Duncker, Zeitschrift für Malac., 1847, p. 59.

Hab. Isle of Bali, Indian Ocean; Largilliert. Island of Corrigidor, Philippines; Cuming.

A solid characteristic species of a livid-blue colour, encircled above and below the sutures with a fillet of brown dots.

Species 45. (Mus. Cuming.)

NASSA DISPAR. *Nass. testā ovato-conicā, crassā, subventricosā, cinerēā, albo lentiginosā, fusco ad suturas et basin punctatā; anfractibus supernè tumidis et obsolete nodulosis, prope apicem plicatis; columellā breviter laminatā, fauce liratā.*

THE DIFFERENT NASSA. Shell ovately conical, thick, subventricose, ash-coloured, freckled with white, dotted with brown at the sutures and at the base; whorls swollen and obsoletely nodulous round the upper

PECTEN

PLATE XVII.

Species 62. (Mus. Cuming.)

PECTEN DARWINII. *Pect. testā orbiculari, tenuiculā, æquivalvi, æquilaterali, sexdecimcostatā, costis subangustis, usque ad umbones distinctis, versus marginem obsoletè obtusè lennè lirato-squamatis, interstitiis obsoletius lirato-squamatis; rosaceo-albidā, liris versus marginem purpurascende-roseis; auriculis grandibus, subæqualibus.*

DARWIN'S PECTEN. Shell orbicular, rather thin, equi-valve, equilateral, sixteen-ribbed, ribs rather narrow, distinctly formed to the umbones, obsoletely obtusely finely scale-ridged towards the margin, interstices more obsoletely scale-ridged; pink-white, ridges purple-rose towards the margin; ears large, nearly equal.

Hab. Santa Cruz, Patagonia; Darwin.

A characteristic species, collected some years ago, at the above-named locality, by Mr. Darwin, but not hitherto described.

Species 63. (Fig. *a, b, c*, Mus. Cuming.)

PECTEN PALLIUM. *Pect. testā orbiculari, æquivalvi, subæquilaterali, crassiusculā, compressā, costis duodecim*

ad quatuordecim radiatā, costis tripartitis, densissimè et pulcherrimè imbricato-squamatis, squamis plus minus lamellatis, erectis; costarum interstitiis squamato-liratis; intensè aurantio-miniaceā, violaceā, aut purpureo-rufā, albo plus minus concentricè undato-strigatā, intus albā, marginem versus colore tinctā; auriculis inæqualibus, verrucoso-squamatis.

THE MANTLE PECTEN. Shell orbicular, equi-valve, nearly equilateral, rather thick, compressed, rayed with twelve to fourteen ribs, which are tripartite, and very densely and beautifully imbricately scaled, the scales being more or less lamellated and erect; interstices between the ribs scale-ridged; deep orange-vermilion, or violet, or purple-red, more or less checkered with white concentric wave-streaks, interior white, more or less stained with colour towards the margin; ears unequal, wart-like squamate.

Ostrea pallium, Linnæus, Syst. Nat. (12th edit.) p. 1145.

Pecten pallium, Lamarck.

Hab. Pacific and Eastern Seas.

The brilliant orange-vermilion specimen here figured was collected by Mr. Cuming at Lord Hood's Island, the violet specimen at the Mauritius, and the purple-red at the Philippine Islands.

April, 1853.

part, plaited near the apex; columella shortly laminated, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Camiguin, Philippines (in sandy mud); Cuming.

A smooth solid rather swollen shell, freckled with white upon an ash ground.

Fig. 46. (Mus. Cuming.)

A specimen of a somewhat variable species, *N. crassa*, of which we have selected a more characteristic variety for description at Plate X.

Fig. 47. (Mus. Cuming.)

This shell, *N. Isabellei*, D'Orbigny, we take to be a variety of *N. marginulata*, represented at Fig. 43.





51



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57



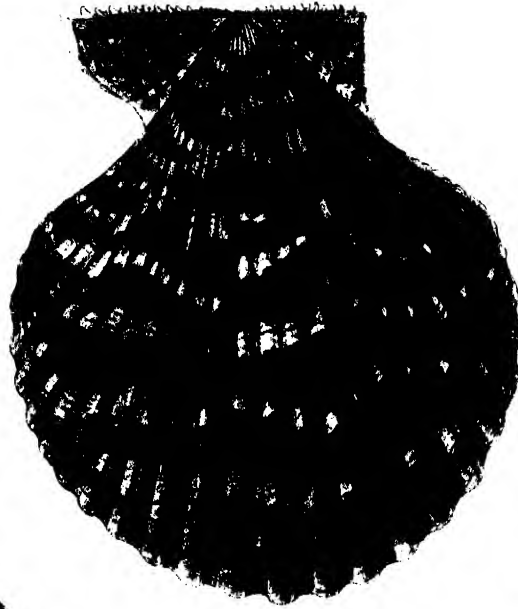
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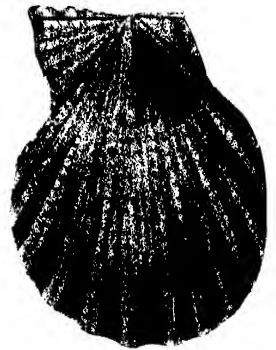
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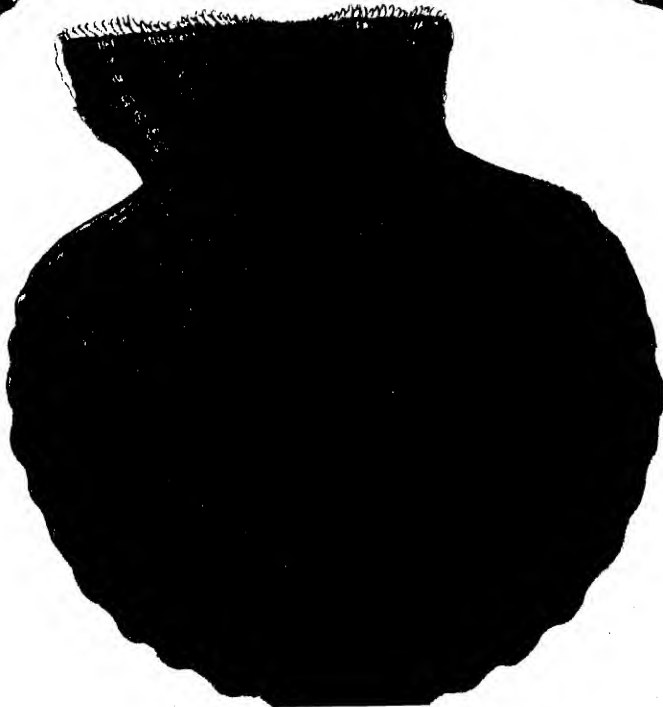
64. a.



65. a.



65. b.



Species 48. (Mus. Cuming.)

NASSA GAUDIOSA. *Nass. testā acuminato-ovatā, lævigatā, cinereo-nigricante et fusco fasciatā, albo lentiginosā, longitudinaliter plicatā, plicis ad suturas mucronatis, deinde evanescentibus; aperturā parvā, faucē liratā, columella brevi-laminatā.*

THE JOYFUL NASSA. Shell acuminate ovate, smooth, banded with ash-black and brown, freckled with white, longitudinally plaited, plaits pointed at the sutures, then fading away; aperture small, interior ridged, columella short-laminated.

HINDS, Moll. Voy. Sulphur, pl. 9. f. 16, 17.

Hab. Straits of Malacca; Hinds.

The plaits of this species have the appearance of being worn away in the centre of the whorls.

Species 49. (Mus. Cuming.)

NASSA CRENELLIFERA. *Nass. testā subacuminato-ovatā, albidā, fulvescente obscure fasciatā; spirā acutā; anfractibus ad suturas concavo-canaliculatis, longitudinaliter crebriliratis, sulcis linearibus decussatis; columellā subexcavatā, labro subincrassato, varicoso, faucē liratā.*

THE CRENULATED NASSA. Shell somewhat acuminate ovate, whitish, obscurely banded with light fulvous; spire sharp; whorls concavely channelled at the sutures, longitudinally closely ridged, decussated with linear grooves; columella slightly excavated, lip rather thickened, varicose, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. —?

A closely netted species, with a peculiar finely concave channel at the sutures.

Fig. 50 and 51. (Mus. Cuming.)

The shells here figured, though differing much at first sight from those represented in the preceding plate as *N. marginulata*, appear to be varieties of that species. They vary chiefly in having the longitudinal ridges more or less strongly developed, and in being with or without a callosity at the aperture.

Species 52. (Mus. Cuming.)

NASSA LACHRYMOSA. *Nass. testā subfusiformi-ovatā, lævigatā, cærulescente-cinerea, conulis duobus pallide cinctā; anfractibus superius are granularum albarum ornatis, granulis duobus pone labrum in plicis descendentes; columellā callosā, labro lativaricoso, faucē liratā.*

THE WEeping NASSA. Shell somewhat fusiformly ovate, smooth, bluish-ash, encircled with two pale zones; whorls ornamented at the upper part with a row of white granules, two granules behind the lip descending into plaits; columella callous, lip broadly varicose, interior ridged.

Hab. —?

A subfusiform species, of an obscurely banded ash colouring, encircled just below the suture with a characteristic row of white granules.

Species 53. (Mus. Cuming.)

NASSA SIQUIJORENSIS. *Nass. testā ovatā, subturritā, rufescente, fasciā pallidā cinctā, longitudinaliter costellatā, costellis permultis confertis, interstitiis striato-cancellatis; suturā plano-canaliculatā; columellā corrugatā, tenuē laminatā, labro muricato-denticulato, faucē liratā.*

THE SIQUIJOR NASSA. Shell ovate, subturreted, reddish, encircled with a pale band, longitudinally finely ribbed, riblets very numerous, close-set, interstices striately cancellated; suture flatly channelled; columella wrinkled, thinly laminated, lip prickly denticulated, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Siquijor, Philippines; Cuming.

Closely allied to *N. crenellifera* in form, sculpture, and painting, though apparently distinct.

Species 54. (Mus. Cuming.)

NASSA PUNCTATA. *Nass. testā acuminato-ovatā, lævi, cinerea, albipunctatā, lineolis rufis cingulatā; spirā acutā; anfractibus plano-declivibus, ad suturas granocrenulatis, granis fusco punctatis; columellā laminā subaurantiā callosā expansā, labro oblique producto, faucē liratā.*

THE DOTTED NASSA. Shell acuminate ovate, smooth, ash, dotted with white, encircled with fine red lines; spire sharp; whorls flatly slanting, granosely crenulated at the sutures, grains dotted with brown; columella with an orange-tinted callous expanded lamina, lip obliquely produced, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Puerto Galero, Province of Albay, Island of Luzon, Philippines (in coarse sand at six fathoms); Cuming.

A flatly slanting, sharply acuminate species, of a dark white-freckled ash-colour, with a characteristic grain-crenulated border to the edge of the whorls next the sutures.

PECTEN.

PLATE XVIII.

Species 64. (Fig. a, b, Mus. Cuming.)

PECTEN CRASSICOSTATUS. *Pect. testā subrotundatā, interdum altiore quam longā, aut ventricosā aut compressā, æquivalvi, subæquilaterali, costis quatuor et viginti radiatā, costis obscure annulatis, lateralibus squamatis, interstitiis lævibus; carneo-albā, pallidè rufo-variegatā, aut purpurascēte, immaculatā; auriculis valde inæqualibus, densè squamatis.*

THE THICK-RIBBED PECTEN. Shell subrotundate, sometimes higher than long, either ventricose or compressed, equivalve, nearly equilateral, rayed with twenty-four ribs, which are obscurely ringed, lateral ribs squamate, interstices smooth; flesh-white, variegated with pale red, or purple, unspotted; ears very unequal, densely scaled.

SOWERBY, Thesaurus Conch. vol. i. p. 75. pl. 15 and 17. f. 111 and 152.

Hab. — ?

The shells here figured differ conspicuously in their general aspect, but are merely different states of the same species.

Species 65. (Fig. a, b, Mus. Cuming.)

PECTEN SQUAMOSUS. *Pect. testā subovalī, sæpè altiore*

quam longā, subæquivalvi, subirregulari, tenuiculā, plus minus compressā, costis duodecim ad octodecim subsquamatis planatis ferè obsoletis lirisque plurimis tenuibus radiatā, versus umbones plano-compressā; auriculis valde inæqualibus; colore variā, nunc purpureo-fuscā, pallidè undato-variegatā, nunc luteā vel aurantiā, albo circa umbones sæpè peculiariter fulguratā.

THE SQUAMOSE PECTEN. Shell somewhat oval, often higher than long, nearly equivalve, rather irregular, rather thin, more or less compressed, rayed with twelve to eighteen subsquamate flattened almost obsolete ribs and numerous fine ridges, flatly compressed towards the umboes; auricles very unequal; colour various, sometimes purple-brown, faintly wave-variegated, sometimes yellow or orange, frequently delicately lightning-marked with white round the umboes.

GMELIN, Syst. Nat. Lister, Hist. Conch. pl. 184. f. 21.

Hab. Philippine Islands; Cuming.

Although varying remarkably in colour, the faint scratch-like white lines round the umboes and on the ears are very characteristic when present. The thin flattened obsolete scaled ribs and ridges are peculiar and constant. At Plate XXI. is figured a brilliant orange variety of this species.

April, 1853.





565



564



566



567



568



569



570



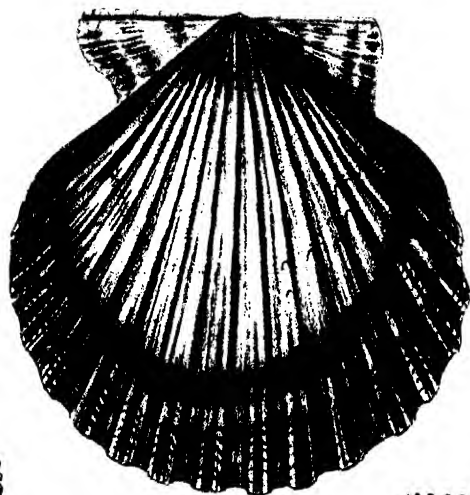
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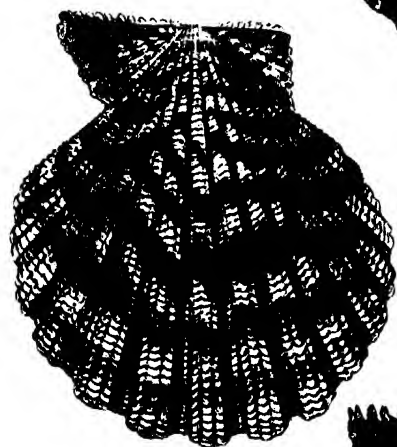
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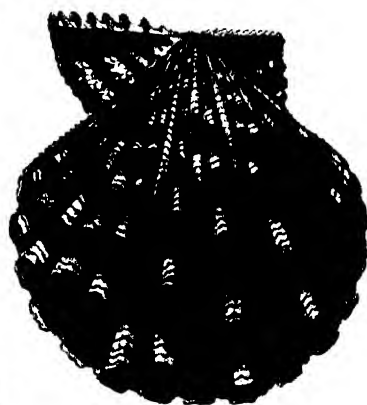
573



62.



63. a.



63 b.



63. c.

NASSA.

PLATE IX.

Species 55. (Mus. Cuming.)

NASSA DENTICULATA. *Nass. testâ ovato-conicâ, subventricosâ, fulvescente, rufo fasciatâ et maculatâ; anfractibus convexis, longitudinaliter flexuoso-plicatis, plicis rudibus, subnodatis, transversim liris, liris angustis numerosis, planiusculis; columellâ callo tenui expanso, fauce liratâ, labro minutè denticulatâ.*

THE DENTICLED NASSA. Shell ovately conical, somewhat ventricose, fulvous, banded and blotched with red; whorls convex, longitudinally flexuously plaited, plaits rude, slightly noduled, transversely ridged, ridges narrow, numerous, and rather flat; columella with a thin expanded callosity, interior ridged, lip minutely denticled.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. ———?

There is some resemblance in the general aspect of this species to young specimens of the common *Buccinum undatum*.

Species 56. (Mus. Cuming.)

NASSA PlicateLLA. *Nass. testâ ovato-conicâ, fulvâ, versus labrum albâ; anfractibus plano-convexis, inferne majoribus, longitudinaliter plicatis, plicis ad suturas obsolete nodosis, versus labrum parvioribus, numerosis, transversim liris, liris planulatis; columellâ laminâ tenui, basi uniplicatâ, fauce liratâ, labro minutè denticulatâ.*

THE FINELY PLAITED NASSA. Shell ovately conical, fulvous, white towards the lip; whorls flatly convex, larger round the lower part, longitudinally plaited, plaits obsoletely noduled at the sutures, smaller and numerous towards the lip, transversely ridged, ridges flattened; columella with a thin lamina, one-plaited at the base, interior ridged, lip minutely denticulated.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Wallwich Bay, Africa.

Allied typically to the European *N. reticulata*.

Species 57. (Mus. Cuming.)

NASSA RETICULATA. *Nass. testâ ovato-conicâ, subfusiformi, fulvescente vel cinerea, longitudinaliter plicatâ, transversim liratâ, liris angustis, subplanulatis, ad*

plicas nodulosis; columellâ brevilaminatâ, aperturâ parviusculâ, fauce denticulatâ, labro simplici.

THE RETICULATED NASSA. Shell ovately conical, somewhat fusiform, fulvous or ash, longitudinally plaited, transversely ridged, ridges narrow, rather flat, nodulous on the plaits; columella short-laminated, aperture rather small, interior denticulated, lip simple.

Buccinum reticulatum, Linnæus, Syst. Nat. (10th edit.) p. 740.

Buccinum pullus, Pennant.

Buccinum vulgatum, Gmelin.

Nassa reticulata, Deshayes.

Hab. Seas of Europe.

The principal variation in this species consists in the plaits being small and close-set, or larger and more distant.

Species 58. (Mus. Cuming.)

NASSA COSTELLIFERA. *Nass. testâ ovato-conicâ, acuminatâ, albidâ, nigricante-castaneo maculatâ et interruptè fasciatâ, liris subtilibus longitudinalibus et transversis undique granulato-decussatâ, canali* levi infra suturas cingulatâ; aperturâ parviusculâ, columellâ corrugatâ, brevilaminatâ, fauce liratâ.*

THE FINE-RIBBED NASSA. Shell ovately conical, acuminate, whitish, blotched and interruptedly banded with blackish-chestnut, granulately decussated throughout with fine longitudinal and transverse ridges, encircled with a smooth canal beneath the sutures; aperture rather small, columella wrinkled, short-laminated, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Curimao, Philippines; Cuming.

A fine characteristic species of solid growth, granulated throughout by the crossing of numerous longitudinal and transverse ridges.

Species 59. (Mus. Cuming.)

NASSA MARGARITIFERA. *Nass. testâ ovato-conicâ, albidâ, rufo-fusco marmoratâ, longitudinaliter plicato-costellatâ, transversim dense liratâ, liris ad costellis nodulosis; spirâ acuminatâ, ad suturas subcanaliculatâ; columellâ subexcavatâ, labro incrassato ascendente, aperturâ fauce liratâ.*

December 1853.



THE PEARLY NASSA. Shell ovately conical, whitish, marbled with red-brown, longitudinally plicately ribbed, transversely densely ridged, ridges noduled on the ribs; spire acuminate, a little channelled at the sutures; columella slightly excavated, lip thickened, ascending, interior of the aperture ribbed.

Buccinum margaritifera, Dunker, Zeitschrift für Malac. 1847, p. 60.

Hab. —?

A very elaborately sculptured and beautiful species.

Species 60. (Mus. Cuming.)

NASSA PALLIDA. *Nass. testā acuminato-conicā, pallidā,*

olivaceo et cinereo tinctā; anfractibus superne declivibus et leviter angulatis, transversim sulcatis et rugoso-striatis, longitudinaliter plicato-costatis, costis ad angulum tuberculatis; columellā subcontortā, labro incrassato, fauce liratā.

THE PALE NASSA. Shell acuminate conical, pale, tinged with olive and ash; whorls slanting and slightly angled at the upper part, transversely grooved and roughly striated, longitudinally plicately ribbed, ribs tubercled on the angle; columella somewhat twisted, lip thickened, interior ridged.

POWIS, Pro. Zool. Soc. 1835, p. 96.

Hab. Panama (in sandy mud at six fathoms); Cuming.

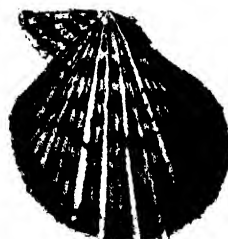
An abnormal form of the genus, referable rather to *Buccinum*.



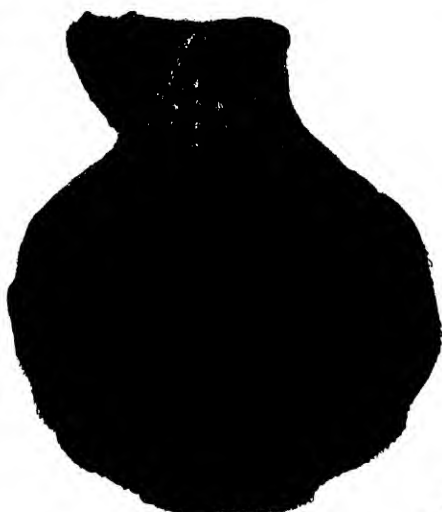
66. a.



67.



68.



66. b.



69.



71.



70.



PECTEN.

PLATE XIX.

Species 66. (Fig. a, b, Mus. Cuming.)

PECTEN PES-FELIS. *Pect. testā trigono-ovali, altiore quam longā, æquilaterali, subæquivalvi, costis rudibus obsolete nodosis subdistantibus octoradiatā, costis interstitiisque tenuigranosis et liris; fusco-rufā, luteo sparsim punctatā et undatq-notatā; valvā dextrā pallidiorē; auriculis valde inæqualibus, verrucoso-liratis.*

THE CAT'S-FOOT PECTEN. Shell triangularly oval, higher than long, equilateral, nearly equivalve, rayed with eight rather distant rude obsolete noded ribs; ribs and interstices finely grained and ridged; brown-red, sparingly dotted and wave-marked with yellow; right valve paler; ears very unequal, wart-ridged.

Ostrea pes-felis, Linnæus, Syst. Nat. (12th edit.) p. 1146.

Ostrea elongata, Born.

Pecten pes-felis, Lamarck.

Pecten Bornii, Paysonneau.

Hab. Mediterranean.

The primary ribs are the same in all varieties of this species, but there are one or two ribs more than are here mentioned formed at the sides in some specimens.

Species 67. (Mus. Cuming.)

PECTEN SPLENDIDULUS. *Pect. testā subtrigono-ovali, compressā, ad latera angulatā, auriculis valde inæqualibus, obliquè productis, tenuè squamoso-liratis, æquivalvā, costis rotundatis ad quinque et viginti muricato-squamatis concinnè radiatā, squamis lateralibus prominentioribus; intensè sanguineo-rufā, rosaceo-albo ad aurículas et ad latera plus minus promiscuè fasciatā.*

THE SPLENDID PECTEN. Shell somewhat triangularly oval, compressed, angled at the sides; ears very unequal, obliquely produced, thinly scale-ridged; equivalve, neatly rayed with twenty-five prickly scaled rounded ribs, lateral scales the more prominent; deep blood-red, more or less promiscuously banded at the ears and at the sides with pink-white.

SOWERBY, Thesaurus Conch. vol. i. p. 76. pl. 20. f. 246.

Hab. Singapore.

The pale blotches on the ears and sides of this species are characteristic.

Species 68. (Mus. Cuming.)

PECTEN ORNATUS. *Pect. testā subtrigono-ovatā, compressā, interdum subdistortā, inæquilaterali, æquivalvi, costis lirisque numerosis angustis, fortibus, irregularibus, granulatis, peculiariter crebriradiatā; lutescente-albā, valvā sinistrā purpureo-rufa profusè maculatā, liris duabus vel tribus centralibus serè immaculatis, valvā dextrā purpurascenle versus marginem tinctā.*

THE ORNAMENTED PECTEN. Shell somewhat triangularly ovate, compressed, sometimes a little distorted, inequilateral, equivalve, peculiarly closely rayed with numerous irregular, strong, narrow, granuled ridges; yellowish-white, left valve profusely spotted with purple-red, two or three of the central ridges being almost unspotted, right valve tinged with purple towards the margin.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 150.

Hab. Barbadoes.

This is a very characteristic species, remarkable for the strong laterally compressed irregular development of the ribs and ridges, and in the distribution of colouring matter, which generally leaves two or three of the central ribs more or less without colour. M. Deshayes has inadvertently repeated this name in reference to a fossil species.

Species 69. (Mus. Cuming.)

PECTEN CRUENTATUS. *Pect. testā subtrigono-orbiculari, altiore quam longā, æquilaterali, æquivalvi, costis ad septem et viginti, plano-convexis, confertis, centralibus latioribus, obsolete arcuatim striatis radiatā; intensè coccineo-rufā, albido hic illic sparsim maculatā; auriculis valde inæqualibus, obliquis, posticis brevissimis.*

THE BLOOD-RED PECTEN. Shell somewhat triangularly orbicular, higher than long, equilateral, equivalve, rayed with about twenty-seven flatly convex close-set ribs, the central being regularly broader; deep scarlet-red, sparingly spotted here and there with white; ears very unequal, oblique, posterior ears very short.

Pecten sanguineus, Sowerby (not of Gmelin).

Hab. Cape Upstart, North Australia; Jukes.

The shell noticed by Mr. Sowerby as a dark variety of



61.



62.



62b



63.



64.



64b



65.



66.



66b



67.

this species, and represented in the plate which follows Fig. 76, is certainly distinct.

Species 70. (Mus. Cuming.)

PECTEN OBLITERATUS. *Pect. testā orbiculari, tenuiculā, compressā, utrinque paululum hiantē, æquilaterali, æquivalvi, extus lævigatā, nitentē, intus creberrimè radiatim liratā; purpurascente-sanguineā, radiatā, valvā dextrā pallidiore.*

THE WORN PECTEN. Shell orbicular, rather thin, compressed, a little gaping at the sides, equilateral, equi-valve, smooth and shining without, very closely radiately ribbed within; purplish-blood colour, right valve paler.

Ostrea obliterata, Linnæus, Syst. Nat. (12th edit.) p. 1146.

Pecten obliteratus, Lamarck.

Hab. China.

Allied to *P. Laurentii* and *pleuronectes*, but uniformly distinct from either of those species.

Species 71. (Mus. Cuming.)

PECTEN LIVIDUS. *Pect. testā subquadrato-ovalā, altiorē quam longā, subirregulari, æquilaterali, æquivalvi, costis creberrimè foliaceo-squamatis decem aut duodecim cum minoribus interpositis irregulariter radiatā, interstitiis liris; cupreo-fuscā, costis majoribus luteis, lineis tenuibus fulgetris albis circa umbones; auriculis inæqualibus, grandibus, obliquis.*

THE LIVID PECTEN. Shell somewhat squarely ovate, higher than long, rather irregular, equilateral, equi-valve, irregularly rayed with ten or twelve very closely foliaceous scaled ribs, with small ribs intervening, interstices ribbed; coppery-brown, the larger ribs yellow, with fine whitish zigzag lines around the umbones; ears unequal, large, oblique.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 154.

Hab. —? 

This species has a close affinity with *P. squamosus*, although the sculpture is so much more strongly developed.

NASSA.

PLATE X.

Species 61. (Mus. Cuming.)

NASSA BIMACULOSA. *Nass. testā suborbiculari, apud dorsum valde gibbosā, tuberculatā; spirā acutā, longitudinaliter subplicatā, anticē transversim sulcatā, olivaceā, fasciā pallidā cinctā, labio cum callo crasso albo magno suborbiculari pincto; columellā laevi, anticē uniplicatā; labro valde incrassato, marginato, anticē sinuato, intus lirato, extus maculis duabus rufo-fuscis ornato.*

THE TWO-SPOTTED NASSA. Shell suborbicular, very gibbous at the back, tubercled; spire sharp, longitudinally subplated, anteriorly transversely grooved, olive, encircled with a pale band, lip encircled by a large nearly orbicular thick white callosity; columella smooth, one-plaited in front; lip much thickened, margined, sinuated in front, ridged within, ornamented externally with two reddish-brown blotches.

A. ADAMS, Pro. Zool. Soc. 1851.

Hab. Island of Siquijor, Philippines (on mud-banks); Cuming.

A solid dwarf-like species, with a wide-spread thickened callosity.

Species 62. (Mus. Cuming.)

NASSA GLOBOSA. *Nass. testā globosā, turgidā, dorso valde gibbosā, tuberculatā, longitudinaliter tenuiplicatā, transversim striatā, obsolete granulosā; spirā brevi, acutā; aperturā minimā, callo perampto crasso orbiculari, lutescente.*

THE GLOBOSE NASSA. Shell globose, swollen, very gibbous at the back, tuberculated, longitudinally finely plaited, transversely striated, obsolete granuled; spire short, sharp; aperture very small, with a very large thick orbicular yellowish callosity.

Buccinum globosum, Quoy and Gaimard, Zool. Voy. de l'Astrolabe, vol. ii. p. 448. pl. 32. f. 25 to 27.

Buccinum clathratum, Kiener.

Hab. Island of Vanikoro and New Ireland; Quoy.

A very gibbous solid species, finely latticed throughout, with a thick wide-spreading callosity.

Species 63. (Mus. Cuming.)

NASSA LUTHOSTOMA. *Nass. testā pyramidal-conicā, ven-*

tricosā, ceruleo-fuscā; spirā subturritā; anfractibus supernè concavo-angulatis, ad angulum plicato-tuberculatis, lineis fuscis cingulatis; aperturā parviusculā, columellā labroque callosis, aurantio-luteis.

THE YELLOW MOUTH NASSA. Shell pyramidally conical, ventricose, blue-brown; spire subturreted; whorls concavely angled round the upper part, plicately tubercled at the angle, encircled with brown lines; aperture rather small, lip and columella callous, orange-yellow.

KIENER, Icon. coq. vivantes, p. 110. pl. 30. f. 1.

Hab. Senegal.

Of a peculiar bluish colour externally, while the enamel of the lip and columella is a bright orange-yellow.

Species 64. (Mus. Cuming.)

NASSA GIBBOSULA. *Nass. testā ovatā, crassā, dorso gibbā et tuberculatā, laevi, olivaceā, cerulescente-albo lenticinosā; spirā brevi, acutā; aperturā parvā, callositate crassā peramplā ferè usque ad apicem repandā, callositate albā, intense aurantio-rufo marginatā.*

THE GIBBOUS NASSA. Shell ovate, thick, gibbous and tubercled at the back, smooth, olive, freckled with bluish-white; spire short, sharp; aperture small, with a very large thick callosity spread out nearly to the apex, callosity white, deep orange-red at the edge.

Buccinum gibbosulum, Linnaeus, Syst. Nat. (12th edit.) p. 1201.

Nassa gibbosula, Lamarck.

Hab. Philippine Islands; Cuming.

A very solid gibbous tubercled species, smooth, white-freckled on olive, with a large callous enamel disc around the aperture.

Species 65. (Mus. Cuming.)

NASSA THERSITES. *Nass. testā ovato-acutā, crassā, valde gibbosā et tuberculatā, obliquè plicatā, dorso laevi, olivaceo-cinereā vel cerulescente; aperturā parvā, callositate amplā orbiculari, lutescente, fauce liratā.*

THE THERSITES NASSA. Shell ovately acute, thick, very gibbous and tubercled, obliquely plaited, smooth at the back, olive-ash or bluish; aperture small, with a large orbicular yellowish callosity, interior ridged.



Buccinum Thersites, Bruguière, Encyclopédie Méthodique,
pl. 394. f. 8.

Nassa Thersites, Lamarck.

Hab. Philippine Islands; Cuming.

A more stoutly gibbous species than the preceding, with a more sharply acuminate spire. The callosity is tinged with yellow.

Species 66. (Mus. Cuming.)

NASSA CALLOSPIRA. *Nass. testâ ovatâ, pallidâ, fasciâ cinereâ angulatâ; spirâ acutâ, transversim liratâ, plicis nodosis longitudinalibus instructâ; labio cum callo magno albo extenso tecto, marginibus usque ad spiram decurrentibus; columellâ anticè biplicatâ; labro crasso, calloso, marginato, fauce valdè liratâ.*

THE CALLOUS-SPIRE NASSA. Shell ovate, pale, encircled with an ash band; spire sharp, transversely ridged, furnished with nodose longitudinal plaits; lip covered with a large white callosity, the edge of which reaches the spire; columella biplicate; lip thick, callous, edged, much ridged within.

A. ADAMS, Pro. Zool. Soc. 1851.

Hab. Island of Bûrias, Philippines (in coral sand at six fathoms); Cuming.

A solid gibbous tuberculately species, finely reticulately sculptured, with a wide-spread orbicular callosity.

Species 67. (Mus. Cuming.)

NASSA CRASSA. *Nass. testâ ovatâ, crassâ, solidâ, albidâ aut flavescente, interdum cœruleo-fusco fasciatâ; spirâ brevi; anfractibus superne concavo-declivibus, longitudinaliter granuloso-plicatis, plicis subdistantibus, plus minus evanidis; aperturâ parvâ, columellâ labroque valdè callosis, callositate non expansâ, fauce liratâ.*

THE THICK NASSA. Shell ovate, thick, solid, whitish or yellowish, sometimes banded with blue-brown; spire short; whorls concavely slanting round the upper part, longitudinally granulosly plaited, plaits rather distant, more or less fading; aperture small, lip and columella very callous, callosity not spread, interior ridged.

Buccinum crassum, Koch, Philippi Abbild. und Besch. Conch. pl. 1. f. 4. p. 43.

Hab. China; Largilliert.

A solid species, in which the lip and columella are very callous at the junction on the body-whorl, but the callosity is not spread.



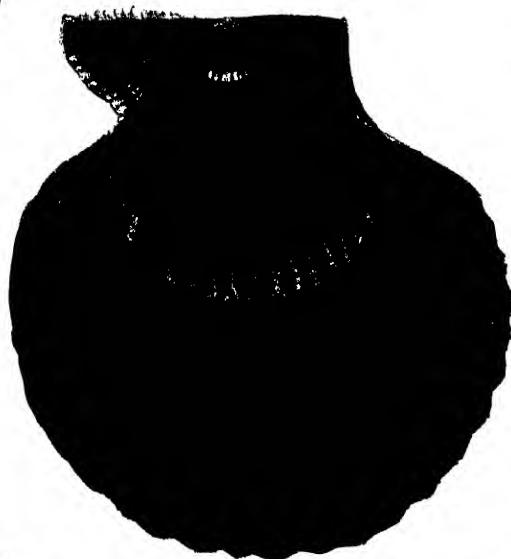
73.



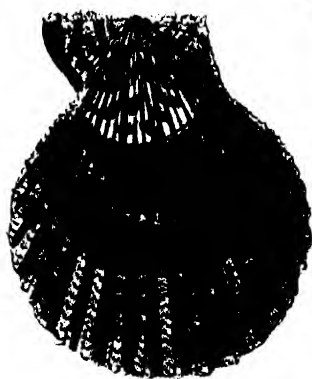
72.



74.



75.



76.



77.



PECTEN

PLATE XX.

Species 72. (Mus. Cuming.)

PECTEN BRUEI. *Pect. testâ subtrigono-orbiculari, subcontortâ, æquilaterali, æquivalvi, profusè irregulariter squamato-costatâ et liratâ; fusco-purpureâ, albo versus umbonem sparsim lineatâ, valvâ dextrâ pallidiorè, costis lirisque parvisculis; auriculis valdè inæqualibus.*

BRUE'S PECTEN. Shell somewhat triangularly orbicular, a little twisted, equilateral, equivalve, profusely irregularly squamately ribbed and ridged; brown-purple, sparingly blotched with white towards the umboes, right valve paler, with the ribs and ridges rather smaller; ears very unequal.

PAYRAUDEAU, Cat. Moll. de Corse, p. 78.

Hab. Mediterranean.

Of somewhat contorted growth, very closely irregularly rayed with scaly ribs and ridges.

Species 73. (Mus. Cuming.)

PECTEN UNDULATUS. *Pect. testâ trigono-ovatâ, æquilaterali, subæquivalvi, subtilissimè granulosâ, costis quinque ad sex subdistantibus radiatâ, costis valvæ sinistræ subnodosis, interstitiis latis, tenuiliratis, costis valvæ dextræ latis et tenuiliratis, interstitiis lævioribus; valvâ sinistrâ coccineo-rufâ, albo sparsim maculatâ, intus purpureo-roseâ, dextrâ albâ, versus umbonem purpureo-roseâ; auriculis valdè inæqualibus.*

THE WAVED PECTEN. Shell triangularly ovate, equilateral, nearly equivalve, very finely granuled, rayed with five to six rather distant ribs, ribs of the left valve subnodose, the interstices being broad and finely ridged, ribs of the right valve broad and finely ridged, the interstices being smoother; left valve scarlet-red, sparingly spotted with white, purple-rose within, right valve white, purple-rose towards the umbo; ears very unequal.

SOWERBY, Thesaurus Conch. vol. i. p. 60. pl. 19. f. 206 and 207.

Hab. Mediterranean.

It is doubtful whether this is anything more than a variety of that extremely variable and widely distributed European species, *P. Danicus*.

Species 74. (Mus. Cuming.)

PECTEN SINGAPORINUS. *Pect. testâ orbiculari, valdè compressâ, æquilaterali, æquivalvi, costis ad duabus et viginti subangustis rotundatis elevatis radiatâ, interstitiis excavatis, pulcherrimè concentricè striatis; albidâ vel rufescente-aurantiâ, cinereo-nigricante plus minus nebulatâ, costarum interstitiis excavatis plurimum albis; auriculis subgrandibus, tenuibus, inæqualibus.*

THE SINGAPORE PECTEN. Shell orbicular, very compressed, equilateral, equivalve, rayed by about twenty-two rather narrow rounded raised ribs, interstices excavated, very beautifully concentrically striated; whitish or reddish-orange, more or less clouded with ash-black, interstices between the ribs excavated, mostly white; ears rather large, thin, unequal.

SOWERBY, Thesaurus Conch. vol. i. p. 74. pl. 13. f. 55, and pl. 14. f. 71.

Hab. Singapore.

Remarkable for its compressed and very regular growth, strongly and numerous ribbed, with the interstices neatly closely striated across.

Species 75. (Mus. Cuming.)

PECTEN ASPERRIMUS. *Pect. testâ tenniculâ, suborbiculari, subæquilaterali, æquivalvi, costis quinque et viginti angulatis, confertis, undique subtiliter scabroso-liratis radiatâ, fusco-rufescente, immaculatâ; auriculis inæqualibus, obliquis.*

THE VERY ROUGH PECTEN. Shell rather thin, suborbicular, nearly equilateral, equivalve, rayed with twenty-five close-set angled ribs, finely scale-ridged throughout, brown-red, unspotted; ears unequal, oblique.

LAMARCK, Anim. sans vert (Deshayes' edit.) vol. vii. p. 145.

Hab. Van Diemen's Land.

The ribs are broad at the base, and adjoin without any intermediate groove. They are then angled to a keel at the summit, and are finely scale-ridged all over.

Species 76. (Mus. Cuming.)

PECTEN LENTIGINOSUS. *Pect. testâ subtrigono-oblongâ, altiore quam longâ, compressiniculâ, subæquilaterali, æquivalvi, costis angulatis foliaceo-squamatis ad duabus*



68



69



70



71



72



73



74



75



76



77

et viginti radiatâ; albidâ, nigro lentiginosâ, umbonibus purpureo-rufis, intus livido-fumêâ; auriculis inæqualibus.

THE FRECKLED PECTEN. Shell somewhat triangular-oblong, higher than long, rather compressed, nearly equilateral, equivalve, rayed with about twenty-two foliaceous-scaled angular ridges; whitish, freckled with black, umboes purple-red, interior of a livid smoky hue; ears unequal.

Hab. Island of Ticao, Philippines (under stones at low water); Cuming.

This is the shell figured and described by Mr. Sowerby as a variety of *P. sanguineus*, but it differs from that species in the following important particulars. The posterior ears are less obliquely shortened, and the ribs are less numerous, while they are angled and foliaceous-scaled.

Species 77. (Mus. Cuming.)

PECTEN TIGRIS. *Pect. testâ obliquè subtrigonâ, tenuiculâ, inæquilaterali, vix æquivalvâ, valvâ dextrâ convexiore; decemcostatâ, costis interstitiisque undique radiatim liris et subtilissimè granulatis; croceo-albâ, valvâ sinistrâ rufo-nigro concentricè undato-strigatâ, dextrâ sparsim maculatâ, umbonibus croceis; auriculis valdè inæqualibus.*

THE TIGER PECTEN. Shell obliquely subtriangular, rather thin, inequilateral, scarcely equivalve, the right valve being more convex, ten-ribbed; ribs and interstices

radiately ridged and very finely granulated throughout; yellow-white, left valve concentrically wave-streaked with red-black, right valve sparingly spotted, umboes yellow; ears unequal.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 141.
Hab. Philippine Islands; Cuming.

The yellow colouring which characterizes this species is more or less strongly stained through into the interior.

Species 78. (Mus. Cuming.)

PECTEN PRUNUM. *Pect. testâ suborbiculari, subcompressâ, æquilaterali, æquivalvâ, costis liris octodècim, undique pulcherrimè foliaceo-squamatis, radiatâ; purpurascènte-carneâ, albo hic illic sparsim lentiginosâ; auriculis inæqualibus, nitidè et profusè squamatis.*

THE PLUM-COLOURED PECTEN. Shell nearly orbicular, rather compressed, equilateral, equivalve, rayed with eighteen ridged ribs, which are very beautifully foliaceous-scaled throughout; purplish-flesh, sparingly freckled here and there with white; ears unequal, neatly and profusely scaled.

Hab. Moreton Bay, Australia; Strange.

A very elaborately sculptured species, allied to *P. asperimus*, from which it differs chiefly in the ribs being broader and more rounded, more highly scaled, and fewer in number. It is delicately tinged throughout with a plum-like bloom.

NASSA.

PLATE XI.

Species 68. (Mus. Cuming.)

NASSA RAVIDA. *Nass. testā ovata, acuminatā, subturritā, rufescente, cingulis transversis granosis sculptā, granis elongatis subquadratis in seriebus obliquis longitudinalibus dispositis; columellā rugosā, brevilaminatā, labro denticulato.*

THE TAWNY NASSA. Shell ovate, acuminate, subturrit, reddish, sculptured with transverse granose belts, the grains being elongated and somewhat square, disposed in oblique longitudinal rows; columella rough, shortly laminated, lip denticulated.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Burias, Philippines (in coral sand at six fathoms); Cuming.

The general aspect of this species, in respect of form and sculpture, reminds one of a group of *Mitra*.

Species 69. (Mus. Cuming.)

NASSA HORRIDA. *Nass. testā ovato-globosā, crassā, albidā, luteo et nigricante-fusco variegatā, transversim sulcatā, longitudinaliter plicatā, plicis noduliferis, aspersis, submuricatis; aperturā subrotundā, columellā laminatā, labro laticaricoso.*

THE RUGGED NASSA. Shell ovately globose, thick, whitish, variegated with yellow and blackish-brown, transversely grooved, longitudinally plaited, plaits noduliferous, rough, somewhat prickly; aperture nearly round, columella laminated, lip broadly varicose.

Buccinum horridum, Dunker, Zeitschrift für Malac. 1847, p. 59.

Hab. — p

A small globose, prickly, plaited shell, variegated with black and brown upon a white ground.

Species 70. (Mus. Cuming.)

NASSA VARIEGATA. *Nass. testā ovato-ventricosā, albido-griseā, fusco variegatā, longitudinaliter striatā, liris transversis granosis subdistantibus ornatā, granis rotundis in seriebus obliquis longitudinalibus dispositis; spirā breviusculā, acutā, canaliculatā; columellā corrugatā, callo tenui expanso, labro margine crenato, faucibus liratā.*

THE VARIEGATED NASSA. Shell ovately ventricose, whitish-grey, variegated with brown, longitudinally striated, ornamented with rather distant transverse ridges of grains, grains rounded, disposed in oblique longitudinal rows; spire rather short, sharp, channelled; columella wrinkled, with a thin expanded lamina, lip crenated at the edge, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Dalaguete, Island of Negros, Philippines; Cuming.

An elegantly formed, subventricose shell, strongly grained throughout, and having a sharp channelled spire.

Species 71. (Mus. Cuming.)

NASSA CIRCUMCINCTA. *Nass. testā oblongo-ovalā, cinerea, nitidā, dorso subgibbosā; spirā brevissimā, obtusā; suturā fuscā; columellā excavatā, callo peramplo crassissimo albo, fusco marginato, usque ad apicem repando, labro calloso, levi.*

THE GIRDLED NASSA. Shell oblong-ovate, ash, shining, rather gibbous at the back; spire very short, obtuse; suture brown; columella excavated, with a very large, thick, white, brown-edged callosity, spread out as far as the apex, lip callous, smooth.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Red Sea.

A very singular and unique form of *Nassa*, having quite the appearance of a *Marginitella*.

Species 72. (Mus. Cuming.)

NASSA GRANIFERA. *Nass. testā ovalā, crassā, albā, muricato-tuberculatā, tuberculis parvis distantibus regularibus; aperturā parvā, columellā excavatā, callo peramplo albo usque ad apicem fere repando, labro incrassato.*

THE GRANIFEROUS NASSA. Shell ovate, thick, white, prickly tubercled, tubercles small, distant, regular; aperture small, columella excavated, with a large white callosity, spread out nearly as far as the apex, lip thickened.

Buccinum graniferum, Kiener, Icon. coq. vivantes, p. 100. pl. 27. f. 111.

Hab. Isle of Bohol, Philippines; Cuming.

NASSA.—PLATE XI.

A solid, white shell, finely prickly-tubercled throughout, with a very thick callosity, reaching nearly to the spire.

Species 73. (Mus. Cuming.)

NASSA MURICATA. *Nass. testā ovato-globosā, lutescente, violaceo-fusco tinctā, muricato-nodosā, nodis distantibus, erectis; aperturā parvā, columellā labroque subcallosis.*

THE PRICKLY NASSA. Shell ovately globose, yellowish, tinged with violet-brown, prickly nodose, nodules

rather distant, erect; aperture small, lip and columella rather callous.

Buccinum muricatum, Quoy and Gaimard, Zool. Voy. de l'Astrolabe, vol. ii. p. 450. pl. 32. f. 32, 33.

Hab. New Ireland.

Prickly noded like the preceding species, but destitute of any spreading callosity.

Fig. 74. (Mus. Cuming.)

The specimen here figured proves to be a variety of *N. ravida*, Fig. 68, of rather stouter growth and finer sculpture, from Malacca.



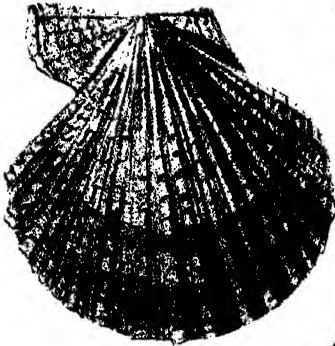
79.



80. a.



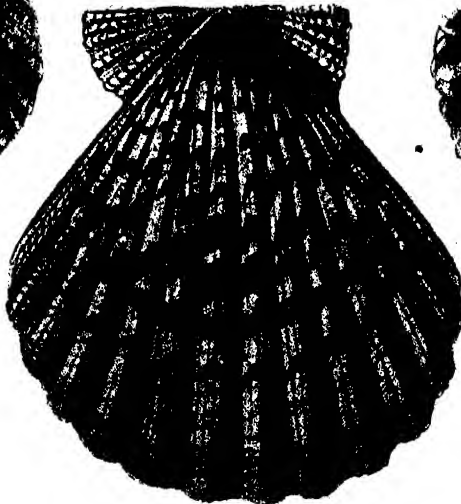
80. b.



65. c.



81.



83.



82.

PECTEN.

PLATE XXI.

Species 79. (Mus. Cuming.)

PECTEN IMBRICATUS. *Pect. testā subtrigono-ovatā, sub-æquilaterali, auriculis valdē inæqualibus, inæquivalvi, valvā dextrā convexiore, valvis ambabus novemcostatis, costis subangustis, tuberculis peculiariter globoso-fornicatis ornatis; opaco-albā, valvā sinistrā maculis perpaucis intensè roseis ornatā, valvarum facie internā croceā, prope marginem violaceā.*

THE IMBRICATED PECTEN. Shell somewhat triangularly ovate, nearly equilateral, ears very unequal, inequivalve, right valve more convex, both valves nine-ribbed, ribs rather narrow, ornamented with peculiarly globosely-arched tubercles; opaque-white, left valve ornamented with a few deep rose spots, interior of the valves saffron-yellow, violet towards the margin.

Ostrea imbricata, Gmelin, Syst. Nat. p. 3318.

An eadem? *Ostrea sauciata*, Gmelin.

Hab. Red Sea.

Remarkably characterized by the swollen vaulted scales gracefully drooping over towards the margin.

Species 80. (Fig. a, b, Mus. Cuming.)

PECTEN LAYARDI. *Pect. testā suborbiculari, auriculis inæqualibus, obliquis, æquilaterali, subæquivalvi, valvā sinistrā subconvexiore, valvis costis duabus et viginti, ad latera subsquamatis, radiatis; croceā aut violaceā, saturatē hic illic marmoratā.*

LAYARD'S PECTEN. Shell nearly orbicular, ears unequal, oblique, equilateral, nearly equivalve, left valve rather the more convex, valves rayed with twenty-two ribs a little squamate at the sides; saffron-yellow or violet, marbled here and there darker.

Hab. Ceylon; Layard.

An interesting new species, brought from Ceylon by Mr. Layard, after whom, at the request of Mr. Cuming, I have the honour to name it.

Species 81. (Mus. Cuming.)

PECTEN SENATORIUS. *Pect. testā orbiculari, subdepressā, æquilaterali, subæquivalvi, valvā dextrā subplanā, val-*

vis costis viginti ad quatuor et viginti obtusè serratis confertis radiatis; miniaceo-rufā, albo nigro-nebulato hic illic marmoratā; auriculis inæqualibus.

THE SENATOR'S PECTEN. Shell orbicular, somewhat depressed, equilateral, nearly equivalve, right valve rather flat, valves rayed by twenty to twenty-four close-set obtusely-serrated ribs; vermilion-red, marbled here and there with black-clouded white; ears unequal.

Ostrea senatoria, Gmelin, Syst. Nat. p. 3327.

Ostrea porphyrea, Gmelin.

Pallium porphyreum, Chemnitz.

Hab. Moluccas, etc.

A richly coloured species, of simple character and extremely symmetrical growth.

Species 65. (Fig. c, Mus. Cuming.)

A richly coloured orange variety of *P. squamosus*, referred to at Pl. XVIII.

Species 82. (Mus. Cuming.)

PECTEN SQUAMATUS. *Pect. testā subtrigono-orbiculari, tenui, irregulari, inæquilaterali, subæquivalvi, compressā, valvis costis septem aut pluribus, distanter squamatis, radiatā, costarum interstitiis plus minus latis, obscurè liralis; albidd, fuscescente-carneo tinctā; auriculis subæqualibus.*

THE SQUAMATE PECTEN. Shell somewhat triangularly orbicular, thin, irregular, inequilateral, nearly equivalve, compressed, valves rayed with seven or more distantly scaled ribs, interstices between the ribs more or less broad, obscurely ridged; whitish, stained with light brown-flesh; ears nearly equal.

Ostrea squamata, Gmelin, Syst. Nat. p. 3329.

Hab. St. Nicolas, Island of Zebu, Philippines; Cuming.

The growth of this species is very irregular, the ridges in the under valve being partially developed here and there into scaled ribs.

Species 83. (Mus. Cuming.)

PECTEN RADULA. *Pect. testā subtrigono-ovatā, altiore*



77



76^a



76^b



77



78^a



78^b



79



80^a



80^b



82

quam longā, crassiusculā, compressā, undique peculiariter scabrā, concentricè undato-lineatā, æquilaterali, subæquivalvi, valvā dextrā conveziore, valvis costis sulcatis duodecim fortiter radiatis; flavicante, valvā sinistrā rufo-nigro maculatā.

THE GRATER PECTEN. Shell somewhat triangularly ovate, higher than long, rather thick, compressed, peculiarly rough throughout, concentrically wavelined, equilateral, nearly equivalve, right valve the

more convex, valves strongly rayed with twelve grooved ribs; yellowish, left valve spotted with red-black.

Ostrea radula, Linnæus, Syst. Nat. p. 1145.

Ostrea maculosa ? Gmelin.

Hab. Philippine Islands; Cuming.

The left valve of this well-known species is peculiarly compressed at the umbo.

NASSA.

PLATE XII.

Species 75. (Mus. Cuming.)

NASSA GRUNERI. *Nass. testā ovato-acutā, crassiusculā, albidā, livido seu spadiceo trifasciatā, plicis longitudinalibus nodiferis sulcisque transversis decussatā, muricatā; spirā brevi, acutā; anfractibus planiusculis, supernè angulatis; columellā brevilaminatā, basi uniplicatā, labro crasso.*

GRUNER'S NASSA. Shell ovately acute, rather thick, whitish, encircled with three livid or fawn bands, decussated with longitudinal nodiferous plaits and transverse grooves, prickly; spire short, sharp; whorls rather flat, angled at the upper part; columella shortly laminated, one-plaited at the base, lip thick.

Buccinum Gruneri, Dunker, Zeitschrift für Malac. 1846. p. 171.

Hab. Philippine Islands; Cuming.

A sharply prickly nodose species, having somewhat a *Ricinus* aspect.

Species 76. (Mus. Cuming.)

NASSA PLANICOSTATA. *Nass. testā subsufusiformi-ovatā, cinerēā, interdum fasciā rufescente-fuscă cingulatā; spirā brevisculā, acutā; anfractibus longitudinaliter plicato-costellatis, interstitiis concinnè cancellatis, basi sulcatis; columellā brevi-laminatā; aperturā subangustè ovatā, fauce liratā, labro incrassato, denticulato.*

THE FLAT-RIBBED NASSA. Shell somewhat fusiformly ovate, ash-coloured, sometimes encircled with a red-dish band; spire rather short, sharp; whorls longitudinally plicately fine-ribbed, interstices neatly latticed, grooved at the base; columella short-laminated; aperture rather narrowly ovate, interior ridged, lip thickened, denticulated.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Payta, Peru (under stones at low water); Cuming.

The ribs become fainter as the shell increases in growth, almost disappearing at the lip.

Species 77. (Mus. Cuming.)

NASSA ANTILLARUM. *Nass. testā ovato-turritā, cinereo-fuscă, flavo-fasciatā, obliquè plicato-costatā, liris transversis decussatā; anfractibus supernè subconcavis, deinde rotundatis; columellā subexpansā, basi contortā, labro crassè varicoso.*

THE WEST INDIA NASSA. Shell ovately turreted, ash-brown, yellow-banded, obliquely plicately ribbed, decussated with transverse ridges; whorls rather concave round the upper part, then rounded; columella slightly expanded, twisted at the base, lip thickly varicose.

Buccinum Antillarum, Philippi, Zeitschrift für Malac. 1848. p. 139.

Hab. Cuba.

Sculptured obliquely with cross-ridged ribs, which are somewhat distant in passing over the rounded portion of the whorls.

Species 78. (Mus. Cuming.)

NASSA SEMIPPLICATA. *Nass. testā subacuminato-ovatā, lutescente-albā, rufo-fusco bifasciatā, longitudinaliter plicato-costatā, costis tenuibus, in anfractu ultimo recanidis; columellā brevilaminatā; aperturā parvā, subrotundatā, labro crassè varicoso, margine minutè denticulato.*

THE HALF-PLAITED NASSA. Shell somewhat acuminately ovate, yellowish-white, encircled with two red-brown bands, longitudinally plicately ribbed, ribs thin, fading away in the last whorl; columella short-laminated; aperture small, rather rounded, lip thickly varicose, minutely denticled at the edge.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Chusan; Benson.

A very characteristic *Scalaria*-like species.

Species 79. (Mus. Cuming.)

NASSA OBSOLETA. *Nass. testā ovatā, solidiusculā, olivaceo-nigricante, apice erosā; spirā brevi; anfractibus convexo-planis, transversim tenuiliris, liris superficialibus subirregularibus; aperturā parvisculā, columellā excavatā, planatā, basi truncatā, labro simplici.*

THE OBSOLETE NASSA. Shell ovate, rather solid, olive-blackish, eroded at the apex; spire short; whorls convexly flat, transversely finely ridged, ridges superficial, rather irregular; aperture rather small, columella excavated, flattened, truncated at the base, lip simple.

SAY, Journ. Acad. Nat. Sci. Philadelphia, vol. ii. p. 232.



NASSA.—PLATE XII.

Hab. New York.

Of a very distinct typical form, resembling *Achatinella*.

Species 80. (Mus. Cuming.)

NASSA SUCCINCTA. *Nass. testā acuminato-turrilā, lævi, cinerascēte, fasciis duabus rufescentibus cinctā; anfractibus planulatis, supremis costellatis; suturā subcanaliculatā; columellā subincrassatā, labro posticē inflexo, anticē valdē sinuato et dentato, crassē varicoso, fauce liratā.*

THE BELTED NASSA. Shell acuminately turreted, smooth, light ash, encircled with two reddish bands; whorls flattened, the uppermost finely ribbed; suture slightly channelled; columella rather thickened, lip posteriorly reflected, anteriorly very much sinuated and toothed, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Masbate, Philippines; Cuming.

A smooth flat-whorled aciculated species, encircled with red-brown bands upon a yellowish ground.

Species 81. (Mus. Cuming.)

NASSA VIBEX. *Nass. testā ovatā, crassiusculā, cinerā, zonulis fuscis et cæruleis cingulatā; anfractibus superne angulatis, longitudinaliter plicatis, plicis liris muricato-nodosis decussatis; aperturā parvisculā, columellā subexcavatā, labro simplici.*

THE BLACK AND BLUE NASSA. Shell ovate, rather thick, ash, encircled with brown and blue zones; whorls angled round the upper part, longitudinally plaited, plates decussated with prickly nodose ridges; aperture rather small, columella slightly excavated, lip simple.

SAY, American Conchology, pl. 57.

Hab. Island of Masbate, Philippines; Cuming.

A prickly *Ricinu*la-like species, allied to *N. Gryneri*.



84.



85.



86.



87.



88. a.



88. b.



89.



PECTEN.

PLATE XXII.

Species 84. (Mus. Cuming.)

PECTEN ROSEO-PUNCTATUS. *Pect. testâ subtrigono-oblongâ, flabelliformi, æquilaterali, æquivalvi, valvis radialim dense acutè liris, costis tumidis subtuberculatis obsoletè radiatâ, undique sub lente minutissimè serratâ; albâ, valvâ sinistrâ pulcherrimè roseo-punctatâ; auriculis valdè inæqualibus.*

THE ROSE-DOTTED PECTEN. Shell somewhat triangularly oblong, fan-shaped, equilateral, equivalve, valves radiately densely sharply ridged, obsoletely rayed with five slightly tuberculated swollen ribs, beneath the lens very minutely serrated; white, left valve very beautifully dotted with rose; ears very unequal.

Hab. Moluccas.

A delicate marble-white shell, of somewhat rude growth, thickly dotted on the upper valve with bright rose.

Species 85. (Mus. Cuming.)

PECTEN FUNEBRIS. *Pect. testâ subtrigono-ovalâ, alliore quam longâ, subæquilaterali, æquivalvi, valvis costis quinque et viginti, undique irregulariter squamatis, radialis; flavescente-nigricante, vel intensè fumeo-fuscâ, albo partim maculatâ; auriculis valdè inæqualibus.*

THE MOURNING PECTEN. Shell somewhat triangularly ovate, higher than long, nearly equilateral, equivalve, valves rayed with five-and-twenty ribs, regularly sealed throughout; yellowish-black or deep smoky-brown, partially mottled with white; ears very unequal.

Hab. Bathurst, Australia.

Beautifully characterized by its very neat and profuse arrangement of scales.

Species 86. (Mus. Cuming.)

PECTEN MINIACEUS. *Pect. testâ subtrigono-ovalâ, gibbosiunculâ, æquilaterali, æquivalvi, valvis costis octo et viginti obtusè serratis radialis; intensè miniaceâ, pallidè sparsim marmoratâ; auriculis valdè inæqualibus.*

THE VERMILION PECTEN. Shell somewhat triangularly ovate, rather gibbous, equilateral, equivalve, valves rayed with eight-and-twenty obtusely serrated ribs;

deep vermilion, sparingly faintly marbled; ears very unequal.

Hab.

A very richly-coloured species, with the ribs close-set, rather appressed, and bluntly serrated.

Species 87. (Mus. Cuming.)

PECTEN USTULATUS. *Pect. testâ trigono-orbiculari, crassiusculâ, æquilaterali, æquivalvi, valvis costis tribus ad quatuor et viginti obtusè distanter serratis radialis; ustulato-rufâ, versus umbones aurantiâ; auriculis subæqualibus, tenuisquamatis.*

THE SCORCHED PECTEN. Shell triangularly orbicular, rather thick, equilateral, equivalve, valves rayed with twenty-three to twenty-four obtusely distantly serrated ribs; burnt red, orange towards the umbones; ears nearly equal, finely scaled.

Hab. Australia.

A fine new species, of rather solid growth, simply characterized.

Species 88. (Fig. a, b, Mus. Cuming.)

PECTEN DIEFFENBACHI. *Pect. testâ subtrigona, prope umbones utrinque peculiariter impresso-plicatâ, æquilaterali, subæquivalvi, valvis sæpè irregularibus, profusè radiatim lineatis et liris, lineis lirisque undique angustè squamatis; rufescente-fuscâ aut violaceâ; auriculis valdè inæqualibus.*

DIEFFENBACH'S PECTEN. Shell subtriangular, peculiarly impressly plicated on both sides near the umbones, equilateral, nearly equivalve, valves often irregular, profusely radiately lined and ridged, the lines and ridges everywhere narrowly squamate; reddish-brown or violet; ears very unequal.

GRAY, App. Dieffenbach's New Zealand.

Hab. New Zealand.

Distinguished among other characters by a peculiarly impressed flexuous growth beneath the front ear.

Species 89. (Mus. Cuming.)

PECTEN NUCLEUS. *Pect. testâ oblongo-orbiculari, crassi-*



82



83



84



85



86



87



88



89



90



91

PECTEN.—PLATE XXII.

usculá, gibbosá, æquilaterali, subæquidatá, viginti-costatá, costis valvæ sinistræ fortibus, elevatis, angustis, dextræ latis, confertis, obtusis, valvâ sinistrâ cinereo-nigricante alboque marmoratâ, dextrâ albidâ; auriculis brevibus, subæqualibus.

THE KERNEL PECTEN. Shell oblong-orbicular, rather thick, gibbous, equilateral, nearly equivalve, twenty-ribbed, ribs of the left valve strong, elevated, and

narrow, of the right valve broad, close-set, and obtuse, left valve marbled with ash-black and white, right valve whitish; ears short, nearly equal.

BORN, Mus. Vind. p. 107. pl. 7. f. 2.

Hab. Cumana, Venezuela.

This appears to be always distinguishable from *P. gibbosus*, though closely allied to it.

Species 82. (Mus. Cuming.)

NASSA CONCINNA. *Nass. testā ovato-conicā, peracutā, pallidē fulvā, fasciis saturatioribus cinctā, longitudinaliter creberrimē undato-plicatā, striis impressis confertis eleganter decussatā; anfractibus rotundatis, granulis moniliformibus ad suturas; aperturā ovali, columellā subrugosā, labro crassē varicoso, fauce liratā.*

THE PRETTY NASSA. Shell ovately conical, very sharp, light fulvous, encircled with darker bands, longitudinally very closely wave-plaited, elegantly decussated with close-set impressed striæ; whorls rounded, with a necklace of grains at the sutures; aperture oval, columella rather rough, lip thickly varicose, interior ridged.

POWIS, Pro. Zool. Soc. 1835, p. 95.

Hab. Toobouai, Polynesia (on the reefs); Cuming.

A pretty, close, concentric wave-ridged shell, with a thick white varix behind the lip.

Species 83. (Mus. Cuming.)

NASSA FOVEOLATA. *Nass. testā oblongo-ovatā, albidā, longitudinaliter densē plicato-costellatā, interstitiis cancellatis; columellā subrugosā, labro varicoso.*

THE PITTED NASSA. Shell oblong-ovate, whitish, longitudinally densely plicately fine-ribbed, interstices cancellated; columella subrugose, lip varicose.

DUNKER, MSS. (Mus. Cuming.)

Hab. —?

A cancellated species, allied to the preceding, with the longitudinal riblets less close together.

Species 84. (Mus. Cuming.)

NASSA LEPTOSPIRA. *Nass. testā ovalā, dorso gibbosā; spirā productā, acutā, lutescente-cinereā, longitudinaliter plicatā, interstitiis cancellatis, basi liratā; columellā corrugatā, callo luteo crasso latē repando, fauce liratā.*

THE THIN-SPIRED NASSA. Shell ovate, gibbous at the back; spire produced, sharp, yellowish-ash, longitudinally plaited, interstices cancellated, ridged at the base; columella wrinkled, with a thick wide-spread yellow callosity, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Ilo Ilo, Isle of Panay, Philippines (on mud-banks at low water); Cuming.

A gibbose, close, concentrically plaited species, with a wide-spread callosity and sharp apex.

Fig. 85. (Mus. Cuming.)

A delicate, pink-freckled variety of *N. gaudiosa*, described at Plate VIII.

Species 86. (Mus. Cuming.)

NASSA MIGA. *Nass. testā ovato-turritā, longitudinaliter obliquē plicatā, lineis impressis cingulatā, lutescente aut rosaceā; aperturā parvā, subrotundā, columellā brevilaminatā, fauce liratā.*

THE MIGA NASSA. Shell ovately turreted, longitudinally obliquely plaited, encircled with impressed lines, yellowish or pink; aperture small, somewhat rounded, columella short-laminated, interior ridged.

Le Miga, Adanson, Voy. au Sénégal, pl. 8. f. 10.

Buccinum Miga, Bruguière.

Nassa Miga, Deshayes.

Hab. Coasts of Barbary and West Africa.

The plaited ribs of this species run obliquely from right to left, not from left to right, as is commonly the case.

Species 87. (Mus. Cuming.)

NASSA GAYI. *Nass. testā ovato-angustā, acuminatā, fusciscente, longitudinaliter plicatā, transversim striatā, granulosa; anfractibus convexiusculis, ad suturas marginatis; columellā vix callosā; aperturā parvā, alhā, ovalā, fauce liratā.*

GAY'S NASSA. Shell ovately narrow, acuminate, brownish, longitudinally plicated, transversely striated, granulated; whorls rather convex, margined at the sutures; columella scarcely callous; aperture small, white, ovate, interior ridged.

KIENER, Icon. coq. vivantes, p. 71. pl. 21. f. 79.

Hab. Coast of Peru.

A brown, acuminate, grain-plaited species, with a small aperture.

Species 88. (Mus. Cuming.)

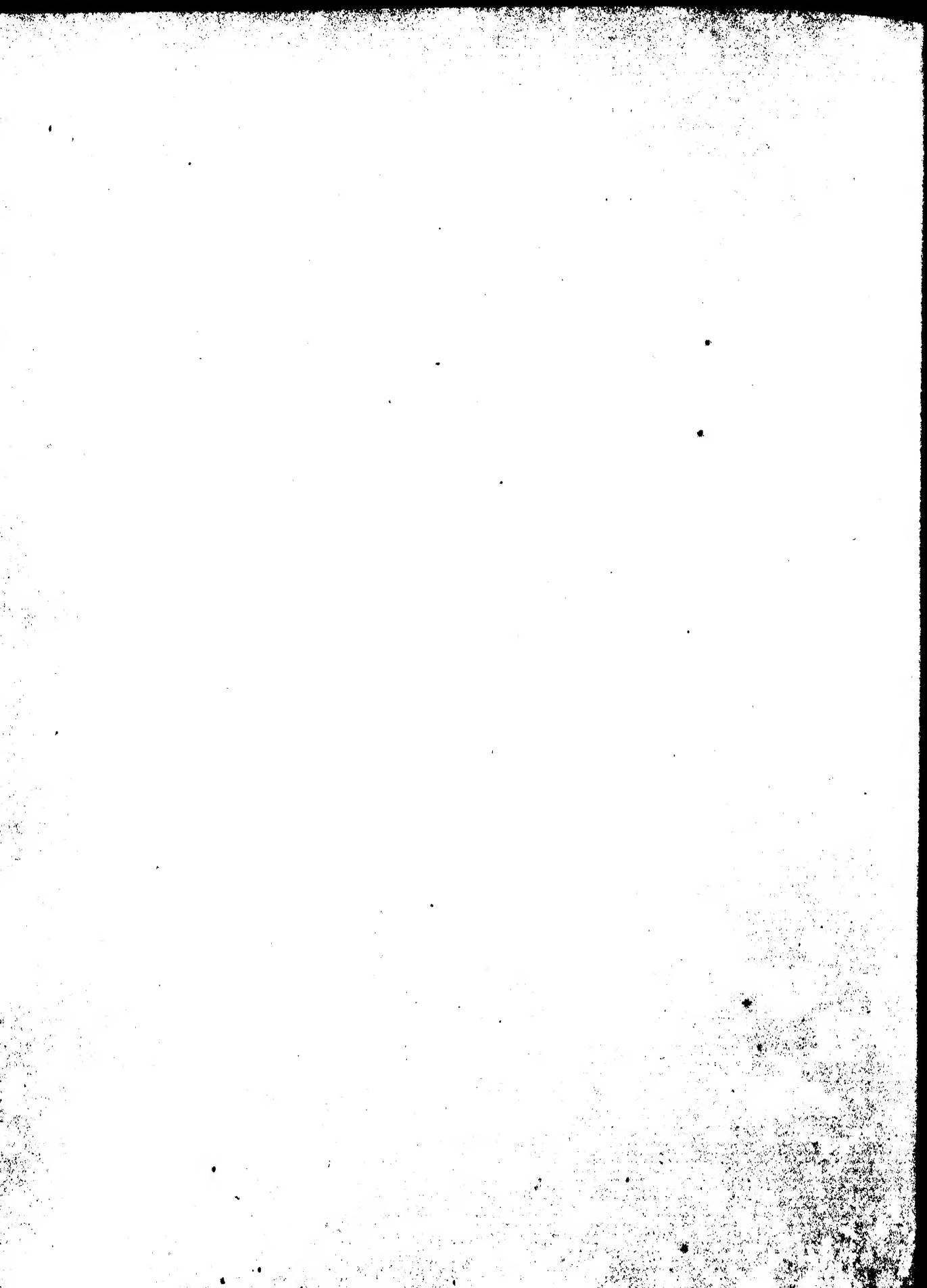
NASSA FIDA. *Nass. testā subgloboosā, crassā, longitudinaliter plicatā, plicis subdistantibus, conspicuē granosis, lutescente-albā, cinereo unifasciatā; spirā brevī; anfractibus supernē concavo-indentatis; aperturā parvā, columellā brevilaminatā, subrugosā.*

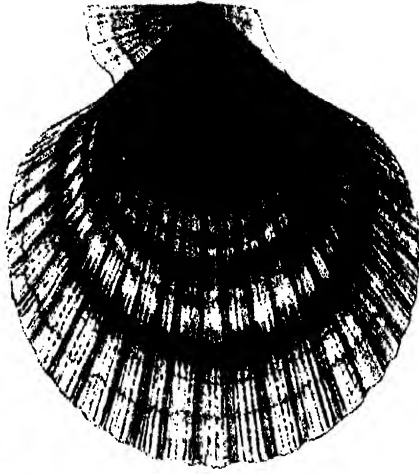
THE TRUSTY NASSA. Shell subglobose, thick, longitudinally plaited, plaits rather distant, conspicuously granose, yellowish-white, encircled with an ash band; spire short; whorls concavely indented round the upper part; aperture small, columella short-laminated, subrugose.

Hab. —?

A small, stout, rather prickly grained shell, each whorl being concavely indented below the suture.



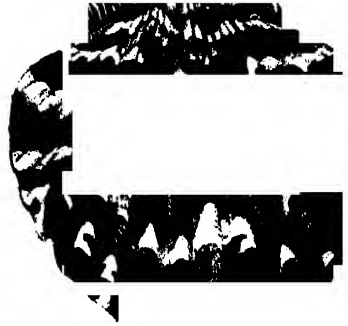




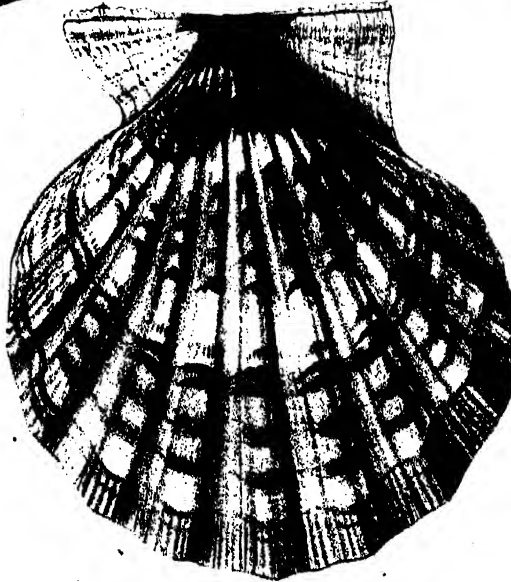
90.



91.



92.



93.



PECTEN.

PLATE XXIII.

Species 90. (Mus. Cuming.)

PECTEN RURIDUS. *Pect. testā suborbiculari, tenuiculā, æquilaterali, inæquivalvi, valvā dextrā planiore, valvis ambabus densè irregulariter costatis, sulcatis, et liris; albā, liris subtiliter granulato-serratis, liris valvæ sinistræ eximie roseis; auriculis valdè inæqualibus.*

THE RUDDY PECTEN. Shell somewhat orbicular, rather thin, equilateral, inequivalve, right valve the flatter, both valves densely irregularly ribbed, grooved, and ridged; white, ridges finely granulatedly serrated, ridges of the left valve delicate rose; ears very unequal.

HINDS, Zool. Voy. Sulphur, Moll. p. 61 pl. 17 f. 5.

Hab. Alaska, North-west America, at thirty-three fathoms; Hinds.

An extremely delicate and characteristic species, allied in some respects to *P. Islandicus*.

Species 91. (Mus. Cuming.)

PECTEN REEVEI. *Pect. testā orbiculari, subæquilaterali, æquivalvi, viginti-costatā, costis latiusculis, elevatis, confertis, lineis concentricis minutè densissimè decussatis; albā, intensè carmineo et violascente tinctā et variegatā; auriculis æqualibus.*

REEVE'S PECTEN. Shell orbicular, nearly equilateral, equivalve, twenty-ribbed, ribs rather broad, raised, close-set, minutely very thickly decussated with concentric lines; white, stained and variegated with deep carmine and violet; ears equal.

ADAMS, Moll. Voy. Samarang, p. 73. pl. 21. f. 10 a, b.

Hab. China.

Peculiar in form and sculpture, and brilliantly variegated with crimson and violet.

Species 92. (Mus. Cuming.)

PECTEN SOLARIS. *Pect. testā orbiculari, subflabelliformi,*

æquilaterali, subæquivalvi, ad umbones et prope marginem compressā, valvis costis serdecim ad octodecim radiatis, costis latiusculis, vix elevatis, ad latera plus minus obsoletis, striis concentricis ubique nitidè decussatis; albā, fusco-rubro variè tinctā et maculatā; auriculis æqualibus.

THE SUN PECTEN. Shell orbicular, somewhat fan-shaped, equilateral, nearly equivalve, compressed at the umbones and near the margin, valves rayed with sixteen to eighteen ribs, ribs rather broad, but slightly raised, more or less obsolete at the sides, neatly decussated everywhere with concentric striae; white, variously stained and mottled with brown-red; ears equal.

BORN, Mus. Cars. Vind. pl. 6. f. 4.

Hab. Macassar and China.

A peculiarly compressed species, variously painted but always with one idea of pattern.

Species 93. (Mus. Cuming.)

PECTEN SPECTRUM. *Pect. testā orbiculari, suballiore quam longā, tenuiculā, subirregulari, æquilaterali, æquivalvi, valvis levigatis, aut sub lente minutissimè decussatā, decemcostatis, costis plus minus obsoletis et irregularibus; albidā, valvā sinistrā olivaceo-fusco pallidè tinctā, prope umbonem maculatā; auriculis grandibus, æqualibus.*

THE GHOST PECTEN. Shell orbicular, rather higher than long, rather thin, somewhat irregular, equilateral, equivalve, valves smooth, or, beneath the lens, very minutely decussated, ten-ribbed, ribs more or less obsolete and irregular; whitish, left valve faintly stained with olive-brown, spotted near the umbo; ears large, equal.

Hab. Australia.

A broad-spread thin species, of irregular growth, indistinctly coloured except near the umbones.



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NASSA.

PLATE XIV.

Species 89. (Mus. Cuming.)

NASSA SERTULA. *Nass. testā acuminato-ovatā, lævi, nitidā, rufescente-fulvā, albo nebulosā; anfractibus converiusculis, prope apicem tenuiplicatis; columellā breviter laminatā, labro subincrassato, varicoso, fauce liratā.*

THE MEDICOT NASSA. Shell acuminate ovate, smooth, shining, reddish-fulvous, clouded with white; whorls rather convex, finely plaited near the apex; columella short-laminated, lip rather thickened, varicose, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Masbate, Philippines (on the reefs); Cuming.

Of a smooth, shining, rusty-brown aspect, relieved by a few white wave-spots.

Species 90. (Mus. Cuming.)

NASSA PULCHELLA. *Nass. testā acuminato-turritā, nitidā, albidā, luteo variegatā, rufo-fusco vittatā, longitudinaliter plicato-costatā, costis flexuosis, subdistantibus, superne obsolete nodulosis, columellā tenuicallosā; aperturā parvā, labro varicoso.*

THE PRETTY NASSA. Shell acuminate turreted, shining, whitish, variegated with yellow, filleted with reddish-brown, longitudinally plicately ribbed, ribs flexuous, rather distant, obsolete noduled at the upper part; columella thinly callous; aperture small, lip varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Cape of Good Hope.

A delicately red-filleted, turreted shell, with the ribs waving flexuously from right to left.

Fig. 91. (Mus. Cuming.)

The shell here figured is the original type of *N. concinna*, Powis, described in the preceding Plate.

Species 92. (Mus. Cuming.)

NASSA TIARULA. *Nass. testā ovatā, lutescente-albā, interdum pallide fasciatā; spirā acutā; anfractibus obsolete striatis, superne angulatis, ad angulum nodoso-tuberculatis; columellā callo subrepando, labro crasse varicoso.*

THE LITTLE TURBAN NASSA. Shell ovate, yellowish-white, sometimes faintly banded; spire sharp; whorls

obsolete striated, angled round the upper part, nodosely tubercled at the angle; columella with a somewhat spread callosity, lip thickly varicose.

KIENER, Icon. coq. vivantes, p. 111. pl. 30. f. 4.

Hab. Madagascar.

Chiefly distinguished by its crown of nodose tubercles.

Species 93. (Mus. Cuming.)

NASSA ZONALIS. *Nass. testā ovatā, crassā, levigatā, lutescente-albā, purpureo-castaneo vividè trizonatā, ad suturas subobsolete plicato-nodulosā, basi sulcatā; aperturā parvā, fauce liratā, columellā callosā, labro incrassato.*

THE ZONED NASSA. Shell ovate, thick, smooth, yellowish-white, encircled with three deep purple-chestnut bands, rather obsolete plicately noduled at the sutures, grooved at the base; aperture small, interior ridged, columella callous, lip thickened.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Ticao, Philippines (on the reefs); Cuming.

A solid, purple-chestnut, banded species, having somewhat the aspect of a *Tornatella*.

Fig. 94. (Mus. Cuming.)

A variety of *N. planicostata*, Sp. 76, in which the ribs are larger, and of a peculiar livid aspect.

Species 95. (Mus. Cuming.)

NASSA LIRELLA. *Nass. testā ovatā, crassiusculā, albidā, ferrugineo-fusco obscure maculatā, longitudinaliter nodoso-plicatā, plicis subflexuosis, striis impressis transversis decussatis; anfractibus sulco prope suturas cingulatis; aperturā parvā, columellā crasse callosā, labro varicoso.*

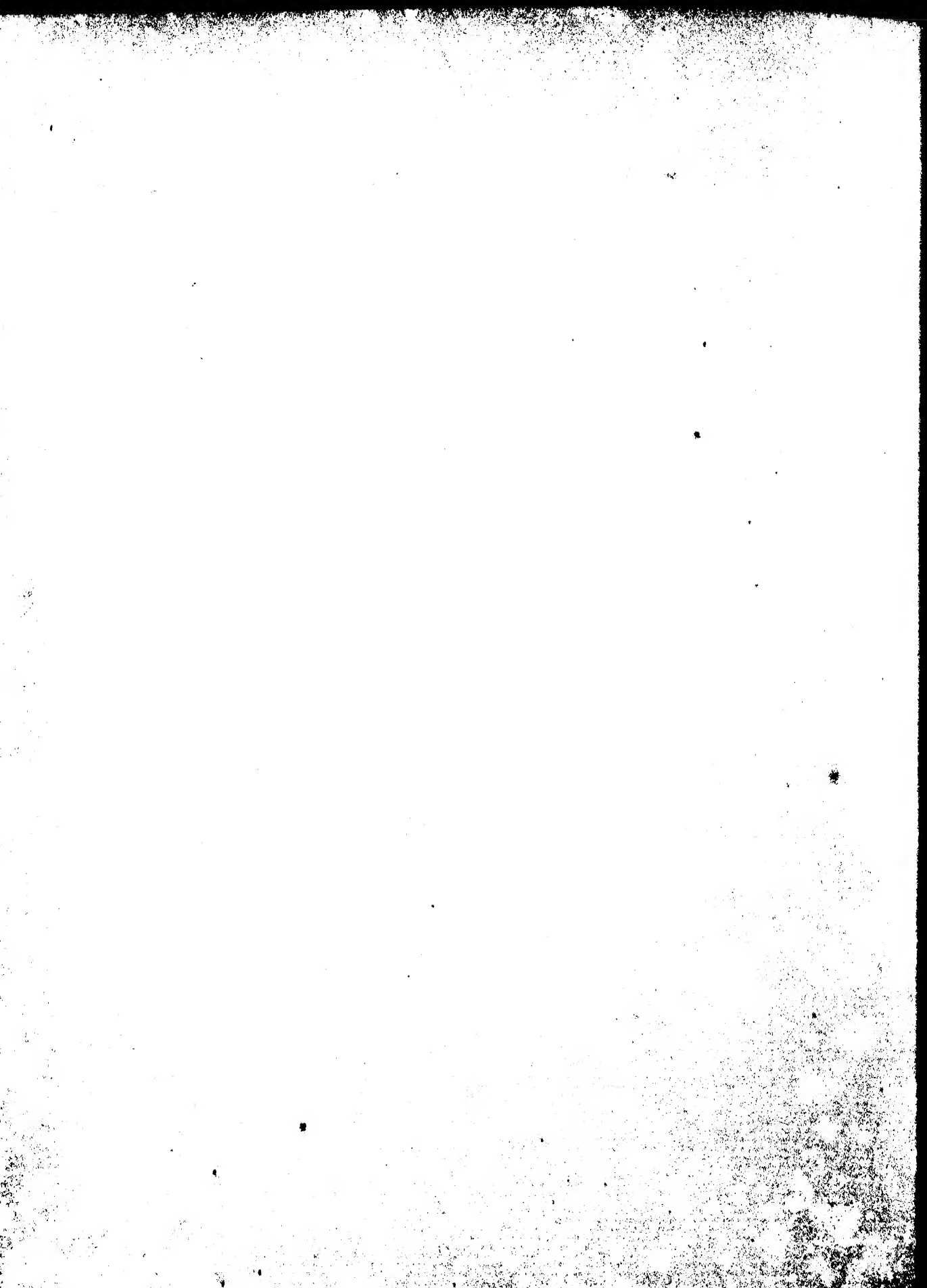
THE LITTLE HARP NASSA. Shell ovate, rather thick, whitish, obscurely blotched with rust-brown, longitudinally nodosely plicated, plaits slightly flexuous, decussated with impressed striæ; whorls encircled near the sutures with a groove; aperture small, columella thickly callous, lip varicose.

BECK, MSS. Mus. Cuming.

Hab. —?

The specimen here figured is not in very good condition, but it is characteristic in form and sculpture.







94. a.



94. b.



95.



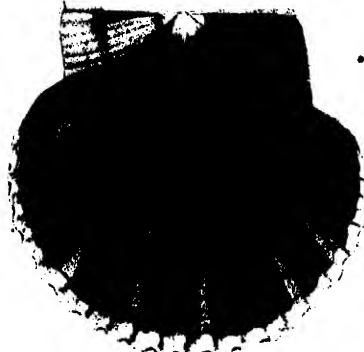
96. a.



97.



98



96. b.



PECTEN.

PLATE XXIV.

Species 94. (Fig. 94a and 95, Mus. Cuming.)

PECTEN CUNEATUS. *Pect. testā ovatā, altiore quam longā, æquilaterali, æquivalvi, valvis versus marginem compressis, densissimè radiatim liris et striatis, liris plus minus obtusè serratis; colore variā, interdum rufo-aurantiā nigro sparsim variegatā, interdum nigricante-fusca luteo variegatā; auriculis valde inæqualibus.*

THE WEDGE-LIKE PECTEN. Shell ovate, higher than long, equilateral, equivalve, valves compressed towards the margin, very thickly radiately ridged and striated, ridges more or less obtusely serrated; colour various, sometimes reddish-orange variegated sparingly with black, sometimes blackish-brown variegated with yellow; ears very unequal.

Hab. Moluccas.

It should be observed that the numbers of this characteristic new species in the plate are No. 94a and 95. The Fig. 94b refers to the following species.

Species 95. (Fig. 94b, Mus. Cuming.)

PECTEN ALBO-LINEATUS. *Pect. testā subtrigono-ovali, compressā, æquilaterali, æquivalvi, quinque et viginticostatā, costis angustis, elevatis, serratis, interstitiis peculiariter excavatis; albidā, costis nigro-olivaceis, quinque radiatim pallidioribus, maculis parvis opacalbis undique peculiariter aspersis; auriculis valde inæqualibus.*

THE WHITE-LINED PECTEN. Shell somewhat triangularly ovate, compressed, equilateral, equivalve, twenty-five-ribbed, ribs narrow, raised, serrated, interstices peculiarly excavated; whitish, ribs black-olive, five radiately paler, peculiarly sprinkled throughout with small opake-white spots; ears very unequal.

SOWERBY, Pro. Zool. Soc. 1842.

Hab. Island of Guimaras, Philippines; Cuming.

The ribs of this species are particularly narrow and raised, dark-coloured, while the interstices are light, and slashed about with opake-white marks.

Species 96. (Fig. a, b, Mus. Cuming.)

PECTEN PYXIDATUS. *Pect. testā semiglobosā, æquilaterali, inæquivalvi, quinque et viginti-costatā, valvā sinistrā planā vel subconcaṃ, costis subangustis, angulatis, valvā dextrā ventricosissimā, costis latiusculis, convexis, perpaucis medio versus marginem sulcatis; valvā sinistrā cinereo-nigrā, albo sparsim maculatā, dextrā albidā carneo-cinerascente; auriculis æqualibus.*

THE BOX-LIKE PECTEN. Shell semiglobose, equilateral, inequivalve, twenty-five-ribbed, left valve flat or sub-concave, ribs rather narrow, angled, right valve ex-

tremely ventricose, ribs rather broad, convex, a few grooved down the middle towards the margin; left valve ash-black, blotched here and there with white, right valve white, sometimes tinged with flesh-ash; ears equal.

BORN, Mus. Cæs. Vind. pl. 6. f. 5 and 6.

Ostrea sulcata, Gmelin.

Hab. China, Australia, Philippine Islands.

Distinguished among other characters by a peculiar livid flesh-ash hue.

Species 97. (Mus. Cuming.)

PECTEN FABRICII. *Pect. testā ovatā, altiore quam longā, compresso-convexā, subæquilaterali, æquivalvi, valvis liris valde irregularibus densè radiatis, sulcis peculiariter granulato-reticulatis; valvā sinistrā pallidè roseo et aurantio tinctā et concentricè fasciatā, dextrā albā; auriculis subæqualibus.*

FABRICIUS' PECTEN. Shell ovate, higher than long, compressly convex, nearly equilateral, equivalve, valves thickly rayed with very irregular ridges, the grooves between which are peculiarly grain-reticulated; left valve tinged and concentrically banded with light rose and orange, right valve white; ears nearly equal.

PHILIPPI, Abbild. und Besch. Conch. Pecten, p. 3. pl. 1. f. 5.

Hab. Greenland.

The ridges are very irregular in width, and the grooves, which are sharply cut, are curiously grain-reticulated. Some of the smaller ridges are squamately serrated near the margin.

Species 98. (Mus. Cuming.)

PECTEN SANGUINOLENTUS. *Pect. testā subtrigona, altiore quam longā, æquilaterali, subæquivalvi, valvis convexo-tumidis, undique peculiariter muricato-squamosis, costis maximis novem radiatis, interstitiis profundè excavatis; albā, intensè carmineo tinctā et maculatā, præcipuè ad costas; auriculis inæqualibus.*

THE BLOOD-STAINED PECTEN. Shell somewhat triangular, higher than long, equilateral, nearly equivalve, valves convexly tumid, peculiarly prickly squamate throughout, rayed with nine very large ribs, interstices deeply excavated; white, stained and spotted, chiefly on the ribs, with rich carmine; ears unequal.

Ostrea sanguinolenta, Gmelin, Syst. Nat. p. 3322.

Pecten sanguinolentus, Sowerby.

Hab. Red Sea.

This very rare and characteristic species is of a peculiar tumid triangular form, curiously prickly-scaled throughout.



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NASSA.

PLATE XV.

Species 96. (Mus. Cuming.)

NASSA SORDIDA. *Nass. testā ovatā, albidā, fuscescente fasciatā; spirā subacutā, suturā canaliculatā; longitudinaliter costatā, costis acutis, numerosis, lineis impressis decussatis; columellā calloso-laminatā, labro subincrassato.*

THE SORDID NASSA. Shell ovate, whitish, banded with light brown; spire rather sharp, suture channelled; longitudinally ribbed, ribs sharp, numerous, decussated with impressed lines; columella callously laminated, lip rather thickened.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Siquijor, Philippines (on the reefs); Cuming.

A close-ribbed species rather impressed at the sutures, with very much the aspect of a *Cancellaria*.

Species 97. (Mus. Cuming.)

NASSA NODICOSTATA. *Nass. testā ovato-conicā, albidā, fasciā pallidē fulvā interruptā cinctā; anfractibus planulatis, superne angulatis, longitudinaliter costatis, costis angustis, distantibus, peculiariter nodulatis; columellā excavatā, labro subincrassato, varicoso.*

THE KNOTTED-RIBBED NASSA. Shell ovately conical, whitish, encircled with a light fulvous interrupted band; ribs flattened, angled round the upper part, longitudinally ribbed, ribs narrow, distant, peculiarly noduled; columella excavated, lip rather thickened, varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Corrigidor, Philippines (in coarse sand at six fathoms); Cuming.

This pretty species, like the preceding, has very much the aspect of a *Cancellaria*.

Species 98. (Mus. Cuming.)

NASSA TEGULA. *Nass. testā ovato-conicā, subgibbosā, levī, nigricante-cinereā, fasciā lutescente cinctā; spirā breviusculā, acutā; anfractibus superne angulatis, ad angulum tuberculatis; aperturā parvā, columellā arcuatā, callositate tenui repandō, labro crassē varicoso.*

THE SLATE NASSA. Shell ovately conical, rather gibbous, smooth, blackish-ash, encircled with a yellowish band;

spire rather short, sharp; whorls angled at the upper part, tubercled at the angle; aperture small, columella arched, with a thin spread callosity; lip thickly varicose.

Hab. —?

A gibbous tubercled species of a peculiar livid slate-colour, encircled with a yellowish band.

Species 99. (Mus. Cuming.)

NASSA CORONULA. *Nass. testā ovato-conicā, olivaceo-cinereā, albifasciatā; spirā brevī; anfractibus ad suturas angulatis, longitudinaliter costatis, costis distantibus, solidis, ad angulum obtusē nodatis, albidis; aperturā minutā, columellā callosā, rugosā, labro incrassato, fauce liratā.*

THE LITTLE CROWN NASSA. Shell ovately conical, olive-ash, white-banded, spire short; whorls angled at the sutures, longitudinally ribbed, ribs distant, solid, obtusely noduled at the angles, whitish; aperture very small, columella callous, rugose, lip thickened, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Corrigidor, Philippines (under stones at low water); Cuming.

A very solid wide-ribbed species, with somewhat the aspect of a miniature *Volute*.

Species 100. (Mus. Cuming.)

NASSA ALBESCENS. *Nass. testā ovatā, albā; anfractibus convexis, plicis tenuibus longitudinalibus obliquis lirisque transversis densē noduloso-cancellatis; columellā excavatā, callositate subrepandā, fauce incrassatā, liratā, labro simplici.*

THE WHITISH NASSA. Shell ovate, white; whorls convex, densely nodulously cancellated with thin longitudinal oblique plaits and transverse ridges; columella excavated, with a slightly spread callosity, interior thickened, lip simple.

Buccinum albescens, Dunker, Philippi, Abbild. und Besch. Conch. p. 68. pl. 2. f. 15.

Hab. West Indies.

A delicate opaque white shell, densely cancellated throughout.

December, 1853.



NASSA.—PLATE XV.

Species 101. (Mus. Cuming.)

NASSA EXILIS. *Nass. testā cylindraceo-ovatā, olivaceā vel purpureo-nigricante obscure fasciatā; spirā acuminatā; anfractibus longitudinaliter plicato-costatis, costis flexuosis, ad suturas granulatis; aperturā parvā, parum callosā, labro incrassato.*

THE SLENDER NASSA. Shell cylindrically ovate, obscurely banded with olive or purple-black; spire acuminate; whorls longitudinally plicately ribbed, ribs flexuous, granulated at the sutures; aperture small, but little callous, lip thickened.

POWIS, Pro. Zool. Soc. 1835, p. 95.

Hab. Payta, Peru (under stones); Cuming.

A livid dark species, of a cylindrically ovate form, delicately flexuously ribbed.

Fig. 102. (Mus. Cuming.)

A characteristic variety of *N. pauperata* represented at Plate VI. Sp. 27.



100



101.



102. a.



102 b.



103 a.



103 b.



103 c.



PECTEN

PLATE XXV.

Species 99. (Mus. Cuming.)

PECTEN CRISTULARIS. *Pect. testā orbiculari, compressiusculā, subaequaliterali, aequalivoi, valvis costis quinque et viginti, plano-convexis, anticis muricato-squamosis, radiatis; albidā, intensē carneo-rufo maculatā et tenuissimē concentricē lineatā; auriculis inaequalibus, squamis prominentibus cristatis.*

THE CRESTED PECTEN. Shell orbicular, rather compressed, nearly equilateral, equivalve, valves rayed with five-and-twenty flatly convex ribs, of which the anterior are prickly-scaled; whitish, blotched and very finely concentrically lined with very dark flesh-red; ears unequal, crested with prominent scales.

ADAMS and REEVE, Zool. Voy. Samarang, Mollusca, p. 74. pl. 21. f. 15.

Hab. Eastern Seas.

Of a peculiar dark flesh-red or blood-brown colouring, gently prickly-scaled on the anterior side, and prominently scaled at the upper edge of the anterior ear.

Species 100. (Mus. Cuming.)

PECTEN MOLLITUS. *Pect. testā suborbiculari, paululum altiore quam longā, compressā, tenui, semipellucidā, aequaliterali, aequalivoi, radiatim undique densē subtilissimē serrato-striatā; albidā aut lutescente, pellucidiorose concentricē lineatā, punctis numerosis fusciscentibus aspersā; auriculis peculiariter inaequalibus.*

THE DELICATE PECTEN. Shell nearly orbicular, a little higher than long, compressed, thin, semitransparent, equilateral, equivalve, radiately densely very finely serrately striated throughout; whitish or yellowish, concentrically stained with transparent rose, and sprinkled throughout with light brownish dots; ears peculiarly unequal.

Hab. Japan.

This, as will be seen by the above description, is an extremely characteristic species; delicate in its substance, sculpture, and colouring, and quite distinct from any hitherto known.

Species 101. (Mus. Cuming.)

PECTEN MILES. *Pect. testā orbiculari, aequaliterali, aequalivoi, valvis rudē et irregulariter decemcostatis, costis alternatim majoribus, costis interstitiisque undique tenuilatis; intus extusque miniaceo-rufā, immaculatā; auriculis aequalibus.*

THE SOLDIER PECTEN. Shell orbicular, equilateral, equi-

valve, valves rudely and irregularly ten-ribbed, ribs alternately larger, ribs and interstices finely ridged throughout; vermilion-red within and without, unspotted; ears equal.

Hab. Java.

Conspicuously ribbed, but the ribs are developed with great irregularity; now broad or narrow, now single or duplicate.

Species 102. (Fig. a, b, Mus. Cuming.)

PECTEN VARIUS. *Pect. testā ovatā, altiore quam longā, aequaliterali, subaequalivoi, valvis costis triginta ad quinque et triginta acutē radiatis, costis plus minus squamatis, squamis subdistantibus, interdum promiscuē porrectis; colore vario; auriculis valdē inaequalibus, squamatis.*

THE MANY-COLOURED PECTEN. Shell ovate, higher than long, equilateral, nearly equivalve, valves sharply rayed with thirty to five-and-thirty ribs, ribs narrow, more or less squamate, scales rather distant, sometimes promiscuously stretched out; colour various; ears very unequal, squamate.

Ostrea varia, Linnæus, Syst. Nat. (12th edit.) p. 1146.

Varieties—*Ostrea muricata, punctata, ochroleuca, mus-telina, flammea, incarnata*, and *versicolor*, Gmelin.

Hab. Seas of Europe.

Extremely variable in colour, and also in the number of ribs, but always distinguished by a constant peculiarity of form and sculpture.

Species 103. (Fig. a, b, Mus. Cuming.)

PECTEN AUSTRALIS. *Pect. testā orbiculari, interdum subventricosā, viz aequaliterali, aequalivoi, valvis costis quatuor et viginti radiatis, costis peculiariter trifurcatis divisis et densē tenuiserratis; nigricante-violaceā vel aurantio-roseā, immaculatā; auriculis inaequalibus.*

THE AUSTRALIAN PECTEN. Shell orbicular, sometimes rather ventricose, scarcely equilateral, equivalve, valves rayed with four-and-twenty ribs, which are peculiarly three-divided and densely finely serrated; blackish-violet or orange-rose, unspotted; ears unequal.

SOWERBY, Thesaurus Conch. vol. i. p. 76. pl. 19. f. 210 and 220.

Hab. Mouth of the Swan River, Australia.

The tripartite division of the ribs is a very striking peculiarity in this species.



103



104



105



106



107



108



109



110



111



112

NASSA.

PLATE XVI.

Species 103. (Mus. Cuming.)

NASSA MACULATA. *Nass. testā angustē acuminatā, levi, politā, lineis impressis distantibus cingulatā, albā, maculis rufo-fuscis longitudinaliter flexuosis bifasciatim cinctā; aperturā parvā, fauce liratā, columellā brevilaminatā, basi plicatā et subproductā, labro varicoso.*

THE BLOTCHED NASSA. Shell narrowly acuminate, smooth, polished, encircled with distant impressed lines, white, encircled with two bands of longitudinally flexuous red-brown spots; aperture small, interior ridged, columella short-laminated, plaited and rather produced at the base, lip varicose.

Aciculina maculata, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Isle of Luzon, Philippines (in muddy sand at low water); Cuming.

A polished *Eulima*-like species, faintly spotted with brown.

Species 104. (Mus. Cuming.)

NASSA TERETIUSCULA. *Nass. testā subturritā, lutescente aut cinereo-olivaceā, fasciā aut lineā rufā cingulatā, levi, nitidā, longitudinaliter plicatā; aperturā parvā, columellā brevilaminatā, labro varicoso.*

THE SUBTERETE NASSA. Shell subturreted, yellowish or ash-olive, encircled with a red band or line, smooth, shining, longitudinally plaited; aperture small, columella short-laminated, lip varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Eastern Seas.

A small, shining, subtransparent shell, of an ash-olive colour, encircled with a red line or band.

Species 105. (Mus. Cuming.)

NASSA DEALBATA. *Nass. testā subacuminato-conicā, opaco-albā, fasciā pallidā luteā cinctā, liris transversis et longitudinalibus confertim noduloso-reticulatā, sulco infra suturas; columellā brevilaminatā; aperturā parvā, fauce liratā, labro varicoso.*

THE WHITENED NASSA. Shell somewhat acuminate, conical, opake-white, encircled with a faint yellowish band, closely nodulously reticulated with longitudinal and transverse ridges, with a groove beneath the

sutures; columella short-laminated; aperture small, interior ridged, lip varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Dumaguete, Isle of Negros, Philippines (in black coarse sand at eleven fathoms); Cuming.

Sculptured throughout with a strong closely reticulated pattern.

Species 106. (Mus. Cuming.)

NASSA COMPTA. *Nass. testā ovato-conicā, subacuminatā, fulvo-rufescente, prope suturas pallidē variegatā; anfractibus convexis, levibus, prope apicem costellatis; columellā callosā, labro subcalloso, fauce liratā.*

THE NEAT NASSA. Shell ovately conic, somewhat acuminate, fulvous-red, palely variegated near the sutures; whorls convex, smooth, finely ribbed near the apex; columella callous, lip rather callous, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Cape St. Antonio, Africa.

A smooth, fulvous-brown shell, faintly blotched with lighter colour at the sutures.

Species 107. (Mus. Cuming.)

NASSA CEROTINA. *Nass. testā acuminato-turritā, lutescente-roseā, longitudinaliter plicato-costatā, interstitiis obsolete clathratis, anfractu ultimo basi bilirato; aperturā parvā, columellā subcallosā, labro varicoso.*

THE WAXEN NASSA. Shell acuminate, turreted, yellowish-rose, longitudinally plicately ribbed, interstices obsoletely latticed, last whorl two-ridged at the base; aperture small, columella subcallous, lip varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Australia.

A narrow, acuminate shell, obliquely longitudinally ribbed throughout with a delicate, yellowish-pink, waxen aspect.

Species 108. (Mus. Cuming.)

NASSA PALLIDULA. *Nass. testā ovali, ventricosā, pallidā, maculis fusciscentibus obscure bifasciatā; spirā subacuminatā, suturis angustē canaliculatis; anfractibus plano-convexis, levibus, basi sulcatis; columellā arcu-*



atā, supernè callositate parvā instructā, fauce liratā, labro subexpanso, crassè varicoso.

THE PALE NASSA. Shell ovate, ventricose, pale, obscurely tinged with two bands of light brown spots; spire rather acuminate; sutures narrowly channelled; whorls flatly convex, smooth, grooved at the base; columella arched, furnished at the upper part with a small callosity, interior ridged, lip rather expanded, thickly varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Malacca (in coarse sand at ten fathoms); Cuming.

A smooth, pale, subventricose species, with the spire delicately channelled.

Species 109. (Mus. Cuming.)

NASSA LUCTUOSA. *Nass. testā acuminato-ovatā, purpureo-*

nigrā, transversim tenuisulcatā, prope apicem longitudinaliter plicatā; anfractibus planulatis, ad suturas irregulariter noduloso-marginatis; aperturā parvā, fauce liratā, columellā labroque crassè callonis.

THE MOURNING NASSA. Shell acuminate ovate, purple-black, transversely finely ridged, longitudinally plaited near the apex; whorls flattened, irregularly nodulously margined at the sutures; aperture small, interior ridged, lip and columella thickly callous.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Cagayan, Isle of Mindanao; Philippines (under stones on the reefs); Cuming.

A very dark purple-black solid species, finely transversely grooved throughout, and irregularly nodulously margined at the sutures.



104.



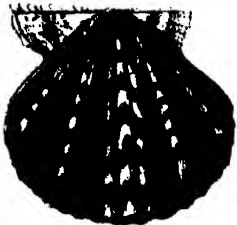
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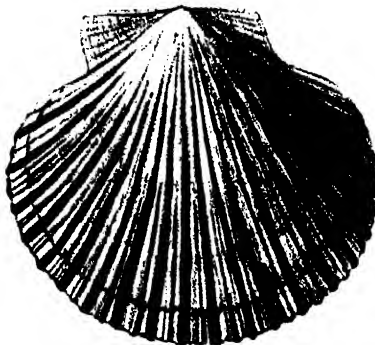
107



108.



109



110



PECTEN

PLATE XXVI.

Species 104. (Mus. Cuming.)

PECTEN MIRIFICUS. *Pect. testā trigono-orbiculari, flabelliformi, tenuiculā, æquilaterali, inæquivalvi, valvā sinistrā concavo-planā, costis quinque distantibus grandisquamatis radiatis, costā esquamatā prope marginem intercurrente, valvā dextrā convexā, decemcostatā, costis ad summitatem angustis et obtusè muricatis; vividè carminēā, aureo-luteo lentiginosā, ad umbones pallidiore; auriculis subæqualibus.*

THE STRANGE PECTEN. Shell triangularly orbicular, fan-shaped, rather thin, equilateral, inæquivalve, left valve concavely flattened, rayed with five distant large-scaled ribs, with a scaleless rib between them near the margin, right valve convex, ten-ribbed, ribs narrow and obtusely prickly along the summit; bright carmine, freckled with golden-yellow, paler at the umbones; ears nearly equal.

Hab. Amboyna.

A very singular species, remarkably distinct from any hitherto described.

Species 105. (Mus. Cuming.)

PECTEN AURANTIACUS. *Pect. testā subtrigono-orbiculari, paululum altiore quam longā, valdè compressā, æquilaterali, subæquivalvi, valvā sinistrā planatā, dextrā lentè convexā, ambabus undique tenuiliratis et densè minutissimè squamatis, costis quatuordecim rotundatis, interstitiis angustis, profundis, radiatis; pallidè roseo, luteo, et vividè aurantio pulcherrimè marmoratā; auriculis subæqualibus.*

THE ORANGE-COLOURED PECTEN. Shell somewhat triangularly orbicular, a little higher than long, very compressed, equilateral, nearly equivalve, left valve flat, right valve slightly convex, both everywhere finely ridged and densely very minutely scaled, and rayed with fourteen rounded ribs, the interstices between which are narrow and deep; very beautifully marbled with pale rose, yellow, and bright orange; ears nearly equal.

ADAMS and REEVE, Zool. Voy. Samarang, Mollusca, p. 74. pl. 21. f. 12.

Hab. China Sea.

Richly coloured and very beautifully minutely sculptured.

Species 106. (Mus. Cuming.)

PECTEN TINCTUS. *Pect. testā trigono-ovatā, altiore quam longā, viz æquilaterali, æquivalvi, valvis undique radiatim densè fortiter liratis, liris subirregularibus, ut plurimum binis, serratis; albidā, aurantio-minio tinctā et variegatā; auriculis valdè inæqualibus.*

THE TINGED PECTEN. Shell triangularly ovate, higher than long, hardly equilateral, equivalve, valves everywhere radiately densely strongly ridged, ridges rather irregular, for the most part in pairs, serrated; whitish, stained and variegated with orange-vermilion; ears very unequal.

Hab. — ?

In sculpture this species approaches *P. asperulatus*, but it differs in form, and the ears are different.

Species 107. (Mus. Cuming.)

PECTEN SUPERBUS. *Pect. testā obliquè flabelliformi, ovatā, crassiusculā, peculiariter concavo-compressā, inæquilaterali, æquivalvi, valvis costis rotundatis angustis duabus et viginti radiatis, costis levibus, vel sub lente minutissimè concentricè striatis, interstitiis profundè excavatis, marginibus lateralibus creberrimè tenuiliratis; albidā aut lutescente, sanguineo-rufa promiscuè conspurcatā; auriculis parvis, leviusculis, subæqualibus.*

THE SUPERB PECTEN. Shell obliquely fan-shaped, ovate, rather thick, peculiarly concavely compressed, inequilateral, equivalve, valves rayed with two-and-twenty narrow rounded ribs, ribs smooth, or, beneath the lens, very minutely concentrically striated, interstices deeply excavated, lateral margins very closely finely ridged; whitish or yellowish, promiscuously smeared with blood-red; ears small, rather smooth, nearly equal.

SOWERBY, Thesaurus Conch. vol. i. p. 62. pl. 12. f. 11.

Hab. — ?

Of a singularly distinct typical form, and characteristic also in respect of colour.

Fig. 108. (Mus. Cuming.)

The shell here figured, from the West Indies, proves on examination to be a variety of *P. exasperatus* from the same locality.



111



112



113



114



115



116



117



118



119



120

Species 109. (Mus. Cuming.)

PECTEN ASPERULATUS. *Pect. testā subtrigono-orbiculari, rudi, irregulari, æquilaterali, subæquivalvi, radiatim densè fortiter liratis, liris valdè irregularibus, ut plurimum binis, muricatis squamato-serratis; albidā aut lutescente, prope marginem violaceo tinctā, ad umbones miniaceā; auriculis inequalibus, anticis grandibus subflexuosis.*

THE ROUGHENED HELIX. Shell somewhat triangularly orbicular, rude, irregular, equilateral, nearly equivalve, radiately densely strongly ridged, ridges very irregular, for the most part in pairs, prickly scale-serrated; whitish or yellowish, tinged with violet near the margin, vermilion-red at the umboes; ears unequal, front ears large, rather flexuous.

ADAMS and REEVE, Zool. Voy. Samarang, Mollusca, p. 74. pl. 21. f. 13.

Hab. Corean Archipelago.

Of characteristic form and sculpture, but rude and irregular in growth.

Species 110. (Mus. Cuming.)

PECTEN PATAGONICUS. *Pect. testā orbiculari, subventricosā, æquilaterali, subæquivalvi, valvis costis numerosis radiatis, costis valvæ sinistrae subangustis, versus marginem trifariam divisis, interstitiis sub lente minutissimè concentricè striatis, valvæ dextræ latioribus, obtusis; albā, costis valvæ sinistrae alternatim fulvo-aurantiis.*

THE PATAGONIAN PECTEN. Shell orbicular, rather ventricose, equilateral, nearly equivalve, valves rayed with numerous ribs, ribs of the left valve rather narrow, three-divided towards the margin, interstices, beneath the lens, very minutely concentrically striated, ribs of the right valve broader, obtuse; white, ribs of the left valve alternately fulvous-orange.

KING, Zoological Journal?

Hab. Patagonia and Straits of Magalhaens.

Elegantly characterized by the alternate rayed colouring of the ribs.

Species 110. (Mus. Cuming.)

NASSA VERSICOLOR. *Nass. testā ovato-conicā, lutescente, ad basin fasciā rufo-fuscă cingulatā; suturā nigricante-fuscă; anfractibus rotundatis, transversim striatis, longitudinaliter fortiter costatis; aperturā parvā, columellā subcallosā, labro varicoso.*

THE VARICOLOURED NASSA. Shell ovately conic, yellowish, encircled with a broad red-brown band at the base; suture blackish-brown; whorls rounded, transversely striated, longitudinally strongly ribbed; aperture small, columella rather callous, lip varicose.

C. B. ADAMS, Cat. Shells of Panama, p. 66.

Hab. Panama.

Sculptured throughout with strong ribs over rounded whorls.

Species 111. (Mus. Cuming.)

NASSA COMPLANATA. *Nass. testā ovalā, olivaceā vel cinereā, luteo-fasciatā, longitudinaliter obliquè granoso-plicatā; anfractu ultimo plus minus complanato; aperturā parvā, fauce liratā, columellā simplici, labro varicoso.*

THE SMOOTH NASSA. Shell ovate, olive or ash, banded with yellow, longitudinally obliquely granosely plaited; last whorl more or less smooth; aperture small, interior ridged, columella simple, lip varicose.

POWIS, Pro. Zool. Soc. 1835, p. 96.

Hab. Atacamas, West Columbia (under stones); Cuming.

Obliquely grain-plaited from the apex downwards, the plaits partially disappearing on the last whorl.

Fig. 112. (Mus. Cuming.)

This shell, which is the type of *N. rufocincta*, A. Adams, is a variety of *N. versicolor*, C. B. Adams, figured above it.

Species 113. (Mus. Cuming.)

NASSA SINUSIGERA. *Nass. testā ovato-conicā, solidiusculā, obliquā, albidā, rufo-fusco tinctā et vittatā, longitudinaliter costatā, costis subflexuosis, ad suturas granulatis; columellā callosā et rugosā, aperturā parvā, fauce liratā, supernè sinuatā, labro varicoso, infernè sinuato.*

THE SINUATED NASSA. Shell ovately conical, rather solid, oblique, whitish, stained and filleted with red-brown, longitudinally ribbed, ribs slightly flexuous, granulated at the sutures; columella callous and wrinkled, aperture small, interior ridged, sinuated at the upper part, lip varicose, sinuated at the lower part.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Samar, Philippines (in coarse sand at eight fathoms); Cuming.

A very characteristic species, peculiar both in form and sculpture.

Species 114. (Mus. Cuming.)

NASSA INCRASSATA. *Nass. testā conico-turritā, fulvescente-luteā, castaneo plus minus fasciatā; anfractibus rotundatis, longitudinaliter costatis, transversim noduloso-liratis; aperturā parviusculā, columellā arcuatā, callosā, labro peculiariter prominentè varicoso.*

THE THICKENED NASSA. Shell conically turreted, fulvous yellow, more or less banded with chestnut; whorls rounded, longitudinally ribbed, transversely nodulously ridged; aperture rather small, columella arched, callous, lip peculiarly prominently varicose.

Tritonium incrassatum, Müller, Zoologia Danica, Prodrome, No. 2946.

Murex incrassatus, Gmelin.

Nassa incrassata, Deshayes.

Buccinum minutum, Pennant.

Buccinum macula, Montagu.

Buccinum Ascanias, Bruguière.

Buccinum asperulum, Philippi.

Buccinum Lincepedii, Payraudeau.

Hab. Seas of Europe.

This well-known European species is peculiarly distinguished by the prominent development of the varix bordering the lip.

Fig. 115. (Mus. Cuming.)

A characteristic dwarf variety of *N. Antillarum* described at Plate XII.

Species 116. (Mus. Cuming.)

NASSA SEMIGRANOSA. *Nass. testā ovato-conicā, albā, luteo interdum variegatā, nitidā; anfractibus transversim tenuissimè striatis, prope suturas longitudinaliter plicatis, plicis supernè bi-tri-tuberculatis; aperturā ovalā, columellā subcallosā, lanigatā, labro varicoso.*

THE HALF-GRAINED NASSA. Shell ovate conical, white, sometimes variegated with yellow, shining; whorls transversely very finely striated, longitudinally plaited near the sutures, plaits two-three-tubercled at the upper part; aperture ovate, columella rather callous, smooth, lip varicose.

Buccinum semigranosum, Dunker, Zeitschrift für Malac. 1846, p. 170.

Hab. —?

A shining ivory-like shell, in which the longitudinal plaits are broken up next the sutures into granules.





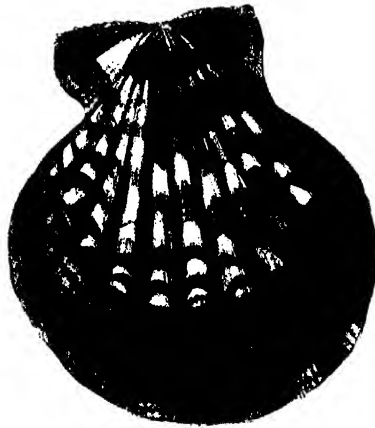
112.



111.



113.



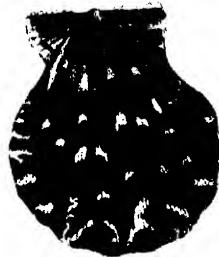
114. a.



115. a.



115. b.



114. b

PECTEN.

PLATE XXVII.

Species 111. (Mus. Cuming.)

PECTEN GEMMULATUS. *Pect. testā subtrigono-orbiculari, tenui, compressā, æquilaterali, subæquivalvi, radiatim dense liratā, liris hic illic majoribus, undique pulcherrimè minutè muricato-serratis; albidā, carneo-roseo tinctā; auriculis valdè inæqualibus.*

THE FINELY-BEADED PECTEN. Shell somewhat triangularly orbicular, thin, compressed, equilateral, nearly equivalve, radiately densely ridged, ridges here and there larger, very beautifully minutely prickly serrated throughout; whitish, stained with flesh-rose; ears very unequal.

Hab. New Zealand.

A thin rather fragile species, very delicately but densely prickly-serrated throughout.

Species 112. (Mus. Cuming.)

PECTEN SPECIOSUS. *Pect. testā trigono-orbiculari, compressā, æquilaterali, subæquivalvi, valvis costis duodecim ad tredecim radiatis, costis latiusculis subconfertis, squamis amplis pulcherrimè fornicatis undique dense ornatis; albā, valvā sinistrā nigricante-fusco roseoque tinctā et tessellatā, dextrā pallidiore; auriculis inæqualibus, imbricato-squamatis.*

THE BEAUTIFUL PECTEN. Shell triangularly orbicular, compressed, equilateral, nearly equivalve, valves rayed with twelve to thirteen ribs, which are somewhat broad and rather close-set, densely ornamented throughout with large very beautifully vaulted scales; white, left valve stained and tessellated with blackish-brown and rose, right valve paler; ears unequal, imbricately-scaled.

Hab. Philippine Islands.

This very beautiful little species is furrowed throughout with rather broadly vaulted scales, and most delicately coloured.

Species 113. (Mus. Cuming.)

PECTEN NASANS. *Pect. testā ovatā, tenui, pellucidā, aureo-vitreā, sub lente minutissimè concentricè striatā, æquilaterali, æquivalvi, valvis costis obtusis, subobsoletis, irregulariter radiatis; auriculis subinæqualibus.*

THE GOLDEN PECTEN. Shell ovate, thin, transparent, golden-glassy, beneath the lens very minutely concentrically striated, equilateral, equivalve, valves irregularly rayed with rather obsolete obtuse ribs; ears rather unequal.

PHILIPPI, (Mus. Cuming.)

Hab. Straits of Magalhães.

A delicately transparent golden glossy shell, with somewhat the aspect of a *Terebratula*.

Species 114. (Fig. a, b, Mus. Cuming.)

PECTEN VEXILLUM. *Pect. testā orbiculari, ad latera subimpressā, crassā, æquilaterali, subæquivalvi, valvis undique tenuilatis et dense minutissimè serratis, costis grandibus octo radiatis; valvā sinistrā carmineā vel cinereo-griseā, albo promiscuè maculatā, valvā dextrā albidā, carmineo punctatā; auriculis æqualibus.*

THE FLAG PECTEN. Shell orbicular, rather impressed at the sides, thick, equilateral, nearly equivalve, valves finely ridged and densely very minutely serrated throughout, rayed with eight large ribs; left valve carmine or ash-grey, promiscuously spotted with white, left valve whitish, dotted with carmine; ears equal.

Hab. —?

A beautiful and very characteristic species, variously painted, although the painting above described is the prevailing colour.

Species 115. (Fig. a, b, Mus. Cuming.)

PECTEN PICA. *Pect. testā orbiculari, compressā, æquilaterali, subæquivalvi, valvis costis unā et viginti angustis radiatis, interstitiis excavatis; albā, griseo et fusco-nigricante variegatā; auriculis grandibus, subæqualibus.*

THE MAGPIE PECTEN. Shell orbicular, compressed, equilateral, nearly equivalve, valves rayed with twenty-one narrow ribs, interstices excavated; white, variegated with grey and brown-black; ears large, nearly equal.

Hab. New Zealand.

A new and well-marked species, pied with brown-black and grey.



117^a



117



118^b



119



120^a



120^b



121



122^a



122^b



123

NASSA.

PLATE XVIII.

Species 117. (Mus. Cuming.)

NASSA FESTIVA. *Nass. testā ovatā, crassā, albā aut cærulescente, nigro-fusco tinctā et lineatā, longitudinaliter subrudē nodoso-costatā, transversim sulcatā; aperturā ovatā, fauce valdē liratā, columellā brevilaminatā, labro crassē varicoso.*

THE PLEASANT NASSA. Shell ovate, thick, white or bluish, stained and lineated with black-brown, longitudinally rather rudely nodosely ribbed, transversely grooved; aperture ovate, interior strongly ridged, columella short-laminated, lip thickly varicose.

POWIS, Pro. Zool. Soc. 1885, p. 95.

Hab. Panama and St. Elena (in sandy mud in six to ten fathoms); Cuming.

A fine solid species conspicuously noduled throughout, the nodules being white upon the dark ground of the interstices.

Species 118. (Mus. Cuming.)

NASSA VARICIFERA. *Nass. testā subelongato-turritā, albidā, fasciis duabus ferrugineo-fuscis cingulatā; spirā exsertā, suturā subcanaliculatā; anfractibus planiusculis, transversim densē impresso-striatis, longitudinaliter crebriplicatis, varice crasso calloso hic illic instructis; aperturā parvā, fauce denticulatā, columellā arcuatā, basi contortā, labro varicoso.*

THE VARICOSE NASSA. Shell somewhat elongately turreted, whitish, encircled with two rust-brown bands; spire exerted, suture slightly channelled; whorls rather flat, transversely densely impressly striated, longitudinally closely plaited, furnished here and there with a thick varix; aperture small, interior denticulated, columella arched, twisted at the base, lip varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Eastern Seas.

This singular *Scalaria*-like species partakes very much of the character of *Triton*.

Species 119. (Mus. Cuming.)

NASSA MYRISTICA. *Nass. testā globoso-acuminatā, crassā, solidā, sordidē albā, fusco lineatā; spirā elevatā; anfractibus rotundatis, obliquē longitudinaliter costatis,*

costis fortibus, rotundatis, liris transversis filiformibus nitidē decussatis; aperturā parviusculā, valdē liratā, columellā labroque crassē callosis.

THE NUTMEG NASSA. Shell globosely acuminate, thick, solid, dirty white, lineated with brown; spire raised: whorls rounded, obliquely longitudinally ribbed, ribs strong, rounded, neatly crossed with transverse filiform ridges; aperture rather small, strongly ridged, lip and columella thickly callous.

HINDS, Moll. Voy. Sulphur, pl. 9. f. 10 and 11.

Hab. Cape of Good Hope; Hinds.

A very characteristic solid subglobose species, strongly obliquely ribbed, the ribs being crossed at regular intervals with painted thread-like ridges.

Species 120. (Mus. Cuming.)

NASSA TRITONIFORMIS. *Nass. testā acuminato-conicā, basi contortā, livido-cinereā, fusco hic illic tinctā; longitudinaliter plicato-costellatā, liris transversis nodoso-reticulatā, nodis albidis; aperturā parvā, fauce valdē liratā, columellā arcuatā, tenuilaminatā, corrugatā, labro enormiter varicoso.*

THE TRITON-SHAPED NASSA. Shell acuminate conic, twisted at the base, livid-ash, stained here and there with brown; longitudinally plicately ribbed, nodosely reticulated with transverse ridges, nodules white; aperture small, interior strongly ridged, columella arched, thinly laminated and wrinkled, lip enormously varicose.

KIENER, Icon. coq. vivantes, p. 108. pl. 30. f. 2.

Hab. Island of Luzon, Philippines (on mud-banks); Cuming.

Belonging to the same peculiar type of the genus as the European *N. incrassata*.

Species 121. (Mus. Cuming.)

NASSA DECUSSATA. *Nass. testā ovato-conicā, basi contortā, albidā, fusco tinctā et obscurē fasciatā; anfractibus mediō angulatis, transversim filoso-liratis, longitudinaliter plicato-costatis, costis ad angulum compresso-nodatis; aperturā rotundatā, fauce liratā, columellā calloso-laminatā, labro varicoso.*

December, 1853.

THE DECUSSATED NASSA. Shell ovately conical, twisted at the base, whitish, stained and obscurely banded with brown; whorls angled in the middle, transversely thread-ridged, longitudinally plait-ribbed, ribs compressly noduled at the angle; aperture rounded, interior ridged, columella callously laminated, lip varicose.

KIENER, Icon. coq. vivantes, p. 109. pl. 30. f. 3.

Hab. Brisbane Water, East Australia; Strange.

More angular and less varicose than the preceding species.

Species 122. (Mus. Cuming.)

NASSA NIVEA. *Nass. testā pyramiduli-conicā, candidā; spirā acutā, suturā impressā; anfractibus planulatis, longitudinaliter subdistanter plicatis, transversim sulcatis; aperturā parvā, fauce liratā, columellā laminā callosā, labro simplici.*

THE SNOWY NASSA. Shell pyramidally conical, white; spire sharp, suture impressed; whorls flattened, longitudinally rather distantly plaited, transversely grooved; aperture small, interior ridged, columella with a callous lamina, lip simple.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Batangas, Island of Luzon, Philippines (in coarse sand at twenty-one fathoms); Cuming.

A solid colourless pyramidally conical species, sculptured with gentle ripple-like plaits, crossed with numerous linear grooves.

Species 123. (Mus. Cuming.)

NASSA POLYGONATA. *Nass. testā globoso-conicā, crassiā, albidā, fusco-rubente tinctā et lineatā; spirā acutā; anfractibus rotundatis, longitudinaliter plicato-costatis, transversim filoso-liratis; aperturā parvā, fortiter liratā, columellā laminatā et plicatā, labro valdè incrassato, varicoso.*

THE MANY-ANGLED NASSA. Shell globosely conical, thick, whitish, stained and lineated with brown-red; spire sharp; whorls rounded, longitudinally plicately ribbed, transversely thread-ridged; aperture small, strongly ridged, columella laminated and plaited, lip very thickened, varicose.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. 10. p. 184.

Hab. Isle of Camiguin, Philippines (in sandy mud at thirty fathoms); Cuming.

A solid globose species, approaching in general aspect a well-known form of *Cancellaria*.



117



120



121



123



124



125



PECTEN.

PLATE XXVIII.

Species 116. (Mus. Cuming.)

PECTEN PICTUS. *Pect. testâ trigono-orbiculari, compresso-converâ, æquilaterali, subæquivalvi, valvis costis tredecim radiatis, costis angulatis, ad latera et interstitiis minutè crenulatis, costarum partibus albis valvæ sinistrae irregulariter corrugato-crenatis; albâ, punctato-roseo latè variegatâ; auriculis subæqualibus.*

THE PAINTED PECTEN. Shell triangularly orbicular, compressly convex, equilateral, nearly equivalve, valves rayed with thirteen ribs, which are angled and minutely crenulated at the sides and in the interstices, white parts of the ribs of the left valve irregularly wrinkle-crenated; white, broadly variegated with dotted rose; ears nearly equal.

SOWERBY, Thesaurus Conch. vol. i. p. 62. pl. 20. f. 233.
Hab. Isle of Baieus, Philippines; Cuming.

It is a singular peculiarity in this shell, that the uncoloured parts of the ribs of the left valve are irregularly wrinkled-crenated, but not the coloured.

Species 117. (Mus. Cuming.)

PECTEN MADREPORARUM. *Pect. testâ obliquè ovatâ, altiore quam longâ, subirregulari, inæquilaterali, inæquivalvi, valvâ sinistrâ plano-converâ, dextrâ convexiore, ambabus densè minutè rudè crenulato-striatis; albâ, valvâ sinistrâ nigro-fusca prope umbonem punctatâ; umbonibus valdè æqualibus.*

THE MADREPORE PECTEN. Shell obliquely ovate, higher than long, rather irregular, inequilateral, inequivalve, left valve flatly convex, right valve more convex, both valves densely minutely rudely crenulately striated; white, left valve dotted near the umbo with black-brown; umbones very unequal.

PETIT, Sowerby, Thesaurus Conch. vol. i. p. 68. pl. 14. f. 68.
Hab. Java (in masses of madreporæ).

A light thin white shell, dotted with black on the left valve towards the umbones.

Species 118. (Mus. Cuming.)

PECTEN SPINIFERUS. *Pect. testâ trigono-orbiculari, compressâ, subæquilaterali, inæquivalvi, valvâ sinistrâ leviter convexâ, costis novem latis, rotundatis, pulcherrimè squamatis radiali, squamis eximè fornicatis et fimbriatis, costis extremis lateraliibus angustis spinoso-*

squamatis, costarum interstitiis subtiliter latis, valvâ dextrâ novem-costatâ et liratâ, squamis parvioribus plus numerosis, minus fimbriatis, costis extremis spinoso-squamatis; semipellucido-albâ, roseo hic illic sparsim tinctâ; auriculis valdè inæqualibus, valvæ dextræ ad marginem spinoso-squamatis.

THE SPINED PECTEN. Shell triangularly orbicular, compressed, nearly equilateral, inequivalve, left valve slightly convex, rayed with nine broad, rounded, very beautifully scaled ribs, scales delicately vaulted and fringed, outer lateral ribs narrow, spinosely-scaled, interstices between the ribs finely ridged, right valve also nine-ribbed and ridged, with the scales smaller, more numerous, and less fringed, outer ribs spinosely squamate; semitransparent-white, sparingly tinged here and there with pink; ears very unequal, ear of the right valve spinosely scaled along the edge.

SOWERBY, Pro. Zool. Soc. 1835, p. 110.

Pecten pulcherrimus, Gray.

Hab. Lord Hood's Island, Pacific Ocean (on the reefs in coral sand); Cuming.

This very beautiful species has very much the general aspect of *P. speciosus*, described in the preceding Plate, but, on examination, it will be found to differ in its detail of sculpture throughout.

Species 119. (Mus. Cuming.)

PECTEN ARTHRITICUS. *Pect. testâ trigono-orbiculari, æquilaterali, inæquivalvi, valvâ sinistrâ convexâ, et irregulariter rudè tumulosâ, valvâ dextrâ minus convexâ, plus regulari, ambabus decemcostatis, costis hic illic nodatis, undique tenuiliratis, lirarum interstitiis subtiliter crenulatis; purpureo-griseâ, prope umbonem albâ; auriculis valdè inæqualibus.*

THE GOUTY PECTEN. Shell triangularly orbicular, equilateral, inequivalve, left valve convex and irregularly rudely tumulous, right valve less convex and more regular, both valves ten-ribbed, ribs here and there noded, finely ridged throughout, interstices between the ridges finely crenulated; purple-grey, white near the umbones; ears very unequal.

Hab. — ?

Of singularly rude growth, though distinguished by a characteristic plan of sculpture.

May, 1853.



124.



125^a



125^b



126.



127^a



127^b



128.



129^a



129^b



130.

Species 120. (Mus. Cuming.)

PECTEN TRIBADIATUS. *Pect. testā suborbiculari, compresso-convexā, æquilaterali, æquivalvi, valvis costis viginti rotundatis squamato-crenatis radiatis, interstitiis excavatis; pallide carneo-variegatā, radiis tribus centralibus albis notatā; auriculis valdè inequalibus.*

THE THREE-RAYED PECTEN. Shell nearly orbicular, compressly convex, equilateral, equivalve, valves rayed with twenty rounded, squamately crenulated ribs, the interstices between which are excavated; variegated with pale flesh-colour, marked with three central white rays; ears very unequal.

Hab. — ?

A distinct and well-marked species, though of simple character.

Species 121. (Mus. Cuming.)

PECTEN ERUBESCENS. *Pect. testā orbiculari, subæquilaterali, inequivalvi, valvā sinistrā subplanā, dextrā convexā, ambabus costis viginti angustis obsolete crenatis radiatis, interstitiis subprofundis; albā, incarnato-roseo pallidè tinctā, et prope umbones sparsim punctatā, valvā dextrā pallidiore; auriculis subæqualibus.*

THE BLUSHING PECTEN. Shell orbicular, nearly equilateral, inequivalve, left valve rather flat, right valve convex, both valves rayed with twenty narrow obsoletely crenated ribs, the interstices between which are rather deep; white, faintly tinged with flesh-pink, sparingly spotted near the umbones, right valve the paler; ears nearly equal.

Hab. — ?

Coloured with a delicate blush tinge of flesh-pink.

Species 122. (Fig. a, b, Mus. Cuming.)

PECTEN TIGRINUS. *Pect. testā trigono-orbiculari, æquilaterali, æquivalvi, valvis, sub lente, minutissimè corrugato-decussatis, et radiatim liris, nunc lævibus, nunc quinquecostatis, costis subnodosis; purpureo-rufā, albo sparsim undato-maculatā; auriculis valdè inequalibus.*

THE TIGER-MARKED PECTEN. Shell triangularly orbicular, equilateral, equivalve, very minutely wrinkle-decussated beneath the lens, and radiately ridged, now smooth, now five-ribbed, ribs slightly noded; purple-red, sparingly wave-blotched with white; ears very unequal.

MULLER, Zoologia Danica, pl. 60. f. 6, 7, 8.
Ostrea tigrina, Gmelin.

Pecten lævis and *obsoletus*, Pennant.

Pecten domesticus, Chemnitz.

Pecten Armoricanus, Cheau.

Hab. Celtic and Northern Europe (in twelve to sixty fathoms); Forbes and Hanley.

Extremely variable in sculpture, but not differing materially in colour.

Species 123. (Mus. Cuming.)

PECTEN FULVICOSTATUS. *Pect. testā subobliquè trigono-ovalā, altiore quam longā, tenui, compressā, inequilaterali, subæquivalvi, valvis decemcostatis, undique tenuiliris et, sub lente, minutissimè granulatis; pellucidā, costis pallidè fulvis, valvā sinistrā punctis paucis carmineis prope umbonem pictā; auriculis valdè inequalibus.*

THE YELLOW-RIBBED PECTEN. Shell rather obliquely triangularly ovate, higher than long, thin, compressed, inequilateral, nearly equivalve, valves ten-ribbed, finely edged throughout, and, beneath the lens, very minutely granulated; transparent-white, ribs pale yellow, left valve painted near the umbos with a few carmine dots; ears very unequal.

ADAMS and REEVE, Zool. Voy. Samarang, Mollusca, p. 74. pl. 21. f. 11.

Hab. Sooloo Archipelago.

A thin semitransparent shell, rayed with ten conspicuous yellow ribs, while the left valve is painted with a few characteristic lake-red dots.

Species 124. (Mus. Cuming.)

PECTEN LIMATULA. *Pect. testā ovalā, altiore quam longā, subcompressā, tenui, semipellucidā, æquilaterali, viz æquivalvi, undique densè liris, liris squamis partim subdistantibus nitidè asperatis; albā, valvā sinistrā purpureo-lacco pallidissimè, et etiam intensè, sparsim maculatā; auriculis valdè inequalibus.*

THE SMALL FILE PECTEN. Shell ovate, higher than long, rather compressed, thin, semitransparent, equilateral, scarcely equivalve, everywhere densely ridged, the ridges being neatly roughened by small rather distant scales; white, left valve very faintly and also very deeply blotched with purple-lake; ears very unequal.

Hab. — ?

Very delicately and elaborately sculptured with suberect scales on close-set ridges.

NASSA.

PLATE XIX.

Species 124. (Mus. Cuming.)

NASSA BADIA. *Nass. testā ovato-acuminatā, lævi, nitidā, castaneā; anfractibus planis, supremis longitudinaliter plicatis, anfractu ultimo transversim obsolete striato; columellā simplici, viz callosā, labro varicoso, intus denticulato.*

THE BROWN NASSA. Shell ovately acuminate, smooth, shining, chestnut; whorls flat, the uppermost longitudinally plaited, last whorl transversely obsolete striated; columella simple, slightly callous, lip varicose, denticulated within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Luzon, Philippines (on the reefs); Cuming.

A solid brown acuminate shell, with no sculpture except near the apex.

Species 125. (Mus. Cuming.)

NASSA CLATHRATULA. *Nass. testā ovatā, niveā; spirā acutā; anfractibus converis, longitudinaliter costatā, costis muricato-nodulosis, interstitiis valde clathratis; columellā brevilaminatā; aperturā parvā, faucē fortiter liratā, labro incrassato.*

THE LATTICED NASSA. Shell ovate, snow-white; spire acute; whorls convex, longitudinally ribbed, ribs prickly nodulous, interstices strongly latticed; columella short-laminated; aperture small, interior strongly ridged, lip thickened.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Siquijor, Philippines (in sandy mud, deep water); Cuming.

Peculiarly characterized by the very strong latticed sculpture in the interstices between the ribs.

Species 126. (Mus. Cuming.)

NASSA CINNAMOMEA. *Nass. testā ovato-acuminatā, cinnamomeā, lævi, nitidā, tenui, subpetiolatā; anfractibus converis, ad suturas tenuimarginatis; columellā simplici, labro varicoso, intus obsolete denticulato.*

THE CINNAMON NASSA. Shell ovately acuminate, cinnamon, smooth, shining, thin, somewhat transparent; whorls convex, finely margined at the sutures; columella simple, lip varicose, obsolete denticulated within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Isle of Negros, Philippines (under stones at low water); Cuming.

A light subtransparent cinnamon-brown shell, smooth throughout.

Species 127. (Mus. Cuming.)

NASSA FUSCATA. *Nass. testā orulatā, fuscā; spirā acuminatā; anfractibus convexiusculis, longitudinaliter plicatis, transversim liris, plicis ad liras tuberculatis, interstitiis lineatis; columellā rugosā, labro incrassato, intus dentato.*

THE BROWN NASSA. Shell ovate, brown; spire acuminate; whorls rather convex, longitudinally plaited, transversely ridged, plaits tuberculated on the ridges, interstices lineated; columella wrinkled, lip thickened, toothed within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. —?

Approximating more to the ordinary type of *Buccinum* than of *Nassa*.

Species 128. (Mus. Cuming.)

NASSA MITRALIS. *Nass. testā fusiformi-conicā, fuscā, lævigatā, prope apicem et pone labrum plicatā, basi sulcatā; suturā tenuimarginatā; columellā simplici, labro intus incrassato.*

THE MITRE-LIKE NASSA. Shell fusiform, conical, brown, smooth, plaited near the apex and behind the lip, grooved at the base; suture thinly margined; columella simple, lip thickened within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Isle of Negros, Philippines (on mud-banks); Cuming.

Plaited near the apex, then smooth, then plaited again behind the lip.

Species 129. (Mus. Cuming.)

NASSA VARIABILIS. *Nass. testā acuminato-ovatā, lutescente-albā, nitente, fuscā rufescente cingulatā, longitudinaliter flexuoso-plicatā, transversim impresso-striatā; columellā callosa-laminatā, subexcavatā, labro simplici, faucē liratā.*

NASSA.—PLATE XIX.

THE VARIABLE NASSA. Shell acuminate ovate, yellowish-white, shining, encircled with a reddish band, longitudinally flexuously plaited, transversely impressly striated; columella callously laminated, rather excavated, lip simple, interior ridged.

PHILIPPI, Mus. Cuming.

Hab. —?

A pale solid species, flexuously plaited and encircled with a characteristic red band.

Species 130. (Mus. Cuming.)

NASSA DENTIFERA. *Nass. testā ovatā, subventricosā, oli-*

vaceo-fuscā, zonulā albā cingulatā, longitudinaliter nodoso-plicatā, interstitiis laevibus; columellā brevilaminatā, labro simplici, varicoso.

THE TOOTHED NASSA. Shell ovate, subventricose, olive-brown, encircled with a whitish zone, longitudinally nodosely plaited, interstices smooth; columella short-laminated, lip simple, varicose.

Powis, Pro. Zool. Soc. 1835, p. 95.

Hab. Bay of Arica, South America (in mud at ten fathoms); Powis.

The longitudinal plaits are very concentrically inclined in this species, and are characteristically noded throughout.



126



127.



128.



129 a



129. b



130.



131.



132.



133.



PECTEN.

PLATE XXIX.

Species 125. (Mus. Cuming.)

PECTEN SENTIS. *Pect. testā subtrigono-ovata, altiore quam longā, æquivalvi, subæquilaterali, profusè tenuilirutā, liris alternatim majoribus, densè aculeato-squamatis, intensè miniatā, maculis perpaucis albis ad latera; auriculis valdè inæqualibus, anticis amplis, subflexuosis, posticis vix nullis.*

THE BRAMBLE PECTEN. Shell somewhat triangularly ovate, higher than long, equivalve, nearly equilateral, profusely finely ridged, ridges alternately larger, densely prickly-scaled, deep vermillion, with a very few whitish spots at the sides; ears very unequal, the anterior large and flexuous, the posterior almost none.

Hab. — ?

A delicate finely prickly-scaled species, of a deep vermillion colour, with the ears very unequal.

Species 126. (Mus. Cuming.)

PECTEN RUSSATUS. *Pect. testā subtrigono-orbiculari, æquilaterali, æquivalvi, valvis costis ad viginti angustis radiatis, interstitiis subexcavatis, ad latera costarum serrulatis; carneā, rufo-fusco lentiginosā; auriculis valdè inæqualibus.*

THE FLESH-TINGED PECTEN. Shell somewhat triangularly orbicular, equilateral, equivalve, valves rayed with about twenty narrow ribs, interstices rather hollow, serrulated at the sides of the ribs; flesh-colour, freckled with red-brown; ears very unequal.

Hab. Sandwich Islands.

A small sharply-ribbed freckled shell.

Fig. 127. (Mus. Cuming.)

This shell proves to be a small yellow variety of *P. exasperatus*, described at Pl. II.

Species 128. (Mus. Saul.)

PECTEN SPECTABILIS. *Pect. testā ovata, flabelliformi, æquilaterali, inæquivalvi, valvā sinistrā planatā, costis duodecim subirregularibus, elevatis, superne rotundatis et concentricè annulato-liratis, radiatā; valvā dextrā convexā, costis latioribus annulato-liratis, interstitiis in valvis ambabus tenuiscabrosis; albā, costis alternatim*

nigricante et minio tessellatis; auriculis grandibus, subæqualibus, rufipunctatis.

THE REMARKABLE PECTEN. Shell ovate, fan-shaped, equilateral, inequivalve, left valve flattened, rayed with twelve somewhat irregular ribs, rounded and concentrically ring-ridged at the upper part; right valve convex, ribs broader, ring-ridged, interstices in both valves finely scabrous; white, ribs alternately tessellated blackish and vermillion; ears large, nearly equal, red-dotted.

Hab. — ?

A very beautifully sculptured and peculiarly coloured species, remarkably distinct from any hitherto described.

Species 129. (Fig. a, b, Mus. Cuming.)

PECTEN CRETATUS. *Pect. testā ovata, paululum altiore quam longā, tenui, pellucidā, subinequilaterali, inæquivalvi, sinistrā convexā, dextrā planiore, ambabus undique pulcherrimè granulato-serratis, costis tenuibus angustis duabus et viginti radiatis; vitreo-albā, valvā sinistrā carneo-roseo maculatā, radiis aut strigis peculiariter opaco-albis ornatā; auriculis parvisculis, subæqualibus.*

THE CHALKY PECTEN. Shell ovate, a little higher than long, thin, transparent, rather inequilateral, inequivalve, left valve convex, right valve flatter, both valves very beautifully granulatedly serrated throughout, and rayed with two-and-twenty thin narrow ribs; glassy white, left valve spotted with flesh-rose, and ornamented with peculiarly opaque-white rays and streaks; ears rather small, nearly equal.

Hab. — ?

Most elaborately sculptured though of delicate glassy texture, marked with flesh-rose spots and opaque chalk-white rays and streaks.

Species 130. (Mus. Saul.)

PECTEN HISTRIONICUS. *Pect. testā ovata, flabelliformi, æquilaterali, inæquivalvi, valvā sinistrā planā, dextrā convexiore, ambabus costis duodecim levibus subobtusis radiatis, costis lateralibus serratis; albā, valvā sinistrā maculis nigris et roseis irregulariter tessellatis et roseo-punctatis, valvā dextrā vix carneo maculatā; auriculis inæqualibus.*



132.



133.



134.



135.



136.



137.



138.



139.



140.



141.

THE HARLEQUIN PECTEN. Shell ovate, fan-shaped, equilateral, inequivalve, left valve flat, right valve more convex, both valves rayed with twelve smooth rather obtuse ribs, lateral ribs serrated; white, left valve irregularly tessellated with black and rose spots, and rose-dotted, right valve faintly flesh-dotted; ears equal.

Gmelin, Syst. Nat. p. 3326.

Hab. Eastern Seas.

The tessellated painting varies considerably in this well-known species, in being larger or smaller in pattern, but it is always of the same colour.

Species 131. (Mus. Cuming.)

PECTEN CUNEOLUS. *Pect. testā obliquè flabelliformi, compressā, inequilaterali, inequivalvi, valvis, sinistrā planiusculā, dextrā convexiore, costis quatuordecim latis liris subnodosis radiatis; fulvā, albo sparsim notatā auriculis valdè inequalibus, posticis vix nullis.*

THE LITTLE WEDGE PECTEN. Shell obliquely fan-shaped, compressed, inequilateral, inequivalve, valves, the left rather flattened, the right more convex, rayed with fourteen broad ridged subnodose ribs; fulvous, sparingly marked with white; ears very unequal, the posterior almost wanting.

Hab. — ?

Characterized distinctly by its compressly oblique nodulous form.

Species 132. (Mus. Cuming.)

PECTEN ALTUS. *Pect. testā ovatā, ventricosā, altiore quam*

longā, æquilaterali, æquivalvi, valvis costis tenuibus numerosis levibus densè radiatis; violaceā, fusco-nigro sparsim variegatā; auriculis valdè inequalibus, posticis perparvis.

THE HIGH PECTEN. Shell ovate, ventricose, higher than long, equilateral, equivalve, valves densely rayed with numerous smooth fine ribs; violet, sparingly variegated with brown-black; ears very unequal, the posterior very small.

Hab. — ?

An unusually narrow ventricose species, closely finely smooth-ribbed throughout.

Species 133. (Mus. Cuming.)

PECTEN PARVUS. *Pect. testā trigono-ovatā, subæquilaterali, æquivalvi, valvis, sinistrā planā, dextrā convexiore, octocostatis, costis rotundatis, tumidiusculis, fimbriato-scabrosis, alternatim majoribus, interstitiis liris parvis scabrosis duabus vel tribus; albā, punctis perpaucis roseis notatā, umbonibus roseis; auriculis valdè inequalibus.*

THE SMALL PECTEN. Shell triangularly ovate, nearly equilateral, equivalve, valves, the left flat, the right more convex, eight-ribbed; ribs rounded, rather swollen, fimbriately scabrous, alternately larger, interstices with two to three small scabrous ridges; white, marked with a very few rose dots, umbones rose; ears very unequal.

SOWERBY, Pro. Zool. Soc. 1835, p. 110.

Hab. Lord Hood's Island, Pacific Ocean (in coral sand on the reefs); Cuming.

Most elaborately scabrous-sculptured throughout.

NASSA.

PLATE XX.

Species 131. (Mus. Cuming.)

NASSA ECHINATA. *Nass. testā ovatā, albidā; anfractibus planiusculis, supernè declivi-angulatis, longitudinaliter tenuiplicatis, plicis lateraliter appressis et echinato-nodosis; aperturā parvā, columellā callositate parvā, labro incrassato, varicoso.*

THE PRICKLY NASSA. Shell ovate, whitish; whorls rather flat, slantingly angled round the upper part, longitudinally thinly plaited, plaits laterally appressed and prickly nodose; aperture small, with a small callosity, lip thickened, varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Isle of Mindoro, Philippines (in sandy mud at three fathoms); Cuming.

The thin longitudinal plaits are peculiarly appressed on one side, and fall in prickly festoons.

Species 132. (Mus. Cuming.)

NASSA GEMMULIFERA. *Nass. testā ovato-conicā, albidā aut cinerascēte, fusco lineatā et fasciatā; spirā acutā; anfractibus longitudinaliter plicatis, plicis nodoso-granulatis, sulcis transversis decussatis; columellā callo expanso albo, labro simplici, fauce liratā.*

THE GEMMED NASSA. Shell ovately conical, whitish or ash-coloured, stained and banded with brown; spire sharp; whorls longitudinally plaited, plaits nodulously granulated, decussated by transverse grooves; columella with a white expanded callosity, lip simple, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Burias, Philippines (in coarse sand at six fathoms); Cuming.

The surface of this species is closely largely granulated throughout.

Species 133. (Mus. Cuming.)

NASSA CELATA. *Nass. testā ovatā, acuminatā, albidā, rufescente fasciatā; spirā acutā, suturā subcanaliculatā; anfractibus planiconvexis, longitudinaliter densè costellatis, interstitiis liris transversis concinè cancellatis, costellis ad suturas elongato-granulatis; columellā brevilaminatā, labro varicoso, fauce liratā.*

THE CARVED NASSA. Shell ovate, acuminate, whitish, banded with pale red; spire sharp, suture slightly channelled; whorls flatly convex, longitudinally densely fine-ribbed, interstices neatly cancellated with transverse ridges, riblets elongately granuled at the sutures; columella short-laminated, lip varicose, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Mindanao, Philippines (in sandy mud at twenty-five fathoms); Cuming.

A solid closely cancellated species, in which the longitudinal riblets have the form of elongated granules next the sutures.

Fig. 131. (Mus. Cuming.)

A variety of *N. variabilis* of the preceding Plate, of more transparent texture, less strongly plaited, with only the faintest indication of a central band.

Species 135. (Mus. Cuming.)

NASSA OBTUSATA. *Nass. testā subgloboso-conicā, albā, rufo villatim maculatā, longitudinaliter costatā, costis distantibus, supernè obtusè tuberculatis, interstitiis liris transversis crebri-cancellatis; aperturā parviusculā, fauce liratā, columellā callosā, labro incrassato, varicoso.*

THE BLUNTED NASSA. Shell somewhat globosely conical, white, filleted with spots of red, longitudinally ribbed, ribs distant, tubercled at the upper part, interstices closely cancellated with transverse ridges; aperture rather small, interior ridged, columella callous, lip thickened, varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Ticao, Philippines (in coral sand at seven fathoms); Cuming.

Chiefly distinguished by the obtuse widely separated character of the ribs, and the fine-ridged sculpture of the interstices.

Species 136. (Mus. Cuming.)

NASSA MULTICOSTATA. *Nass. testā ovatā, acuminatā, albā, interdum rufescente variegatā, longitudinaliter tenuicostatā, costis numerosis, confertis; columellā callosā, labro simplici, intus obsolete denticulato.*

THE MANY-RIBBED NASSA. Shell ovate, acuminate, white, sometimes variegated with pale red, longitudinally finely ribbed, ribs numerous, close-set; columella callous, lip simple, obsolete denticulated within.

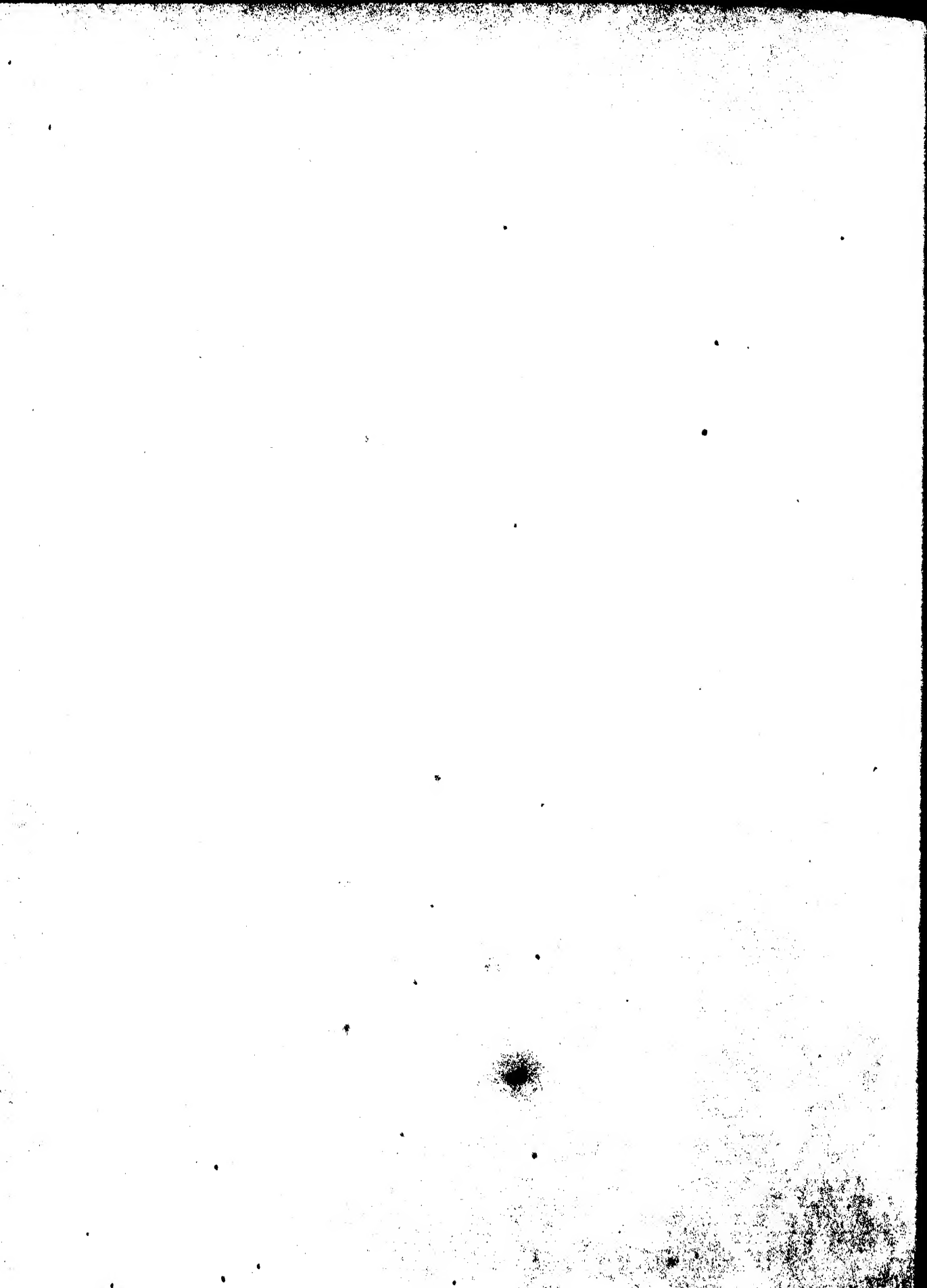
A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Luzon, Philippines (in coarse sand at four fathoms); Cuming.

A very delicate close-ribbed species, the ribs being finer and more numerous as they approach the lip.

Fig. 137. (Mus. Cuming.)

A well-marked variety of *N. Gayi* described at Plate XIII. Sp. 87.

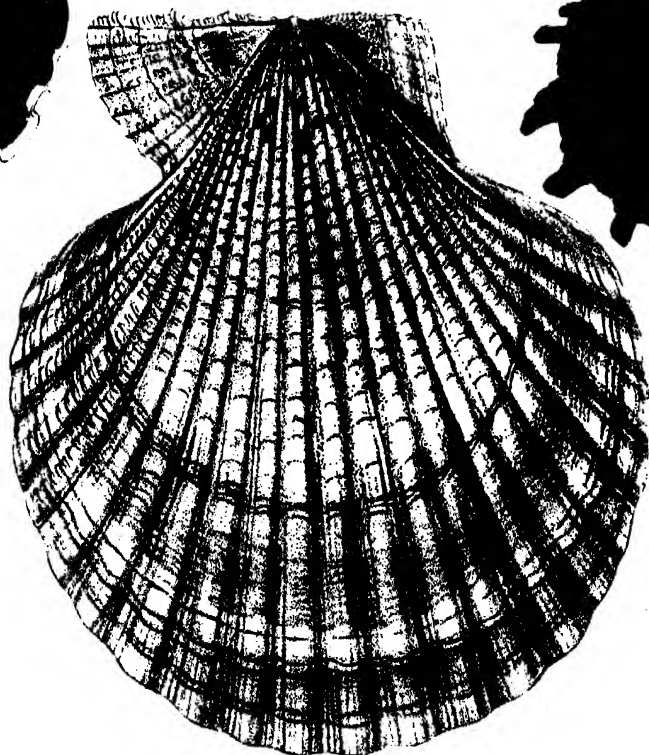




134. a.



135.



134. b.



136.

PECTEN.

PLATE XXX.

Species 134. (Fig. a, b, Mus. Cuming.)

PECTEN NOBILIS. *Pect. testā suborbiculari, compresso-concavā, æquilaterali, æquivalvi, costis duabus et viginti radiatā, costis anticis tenuisquamatis, interstitiis subtiliter serrato-liratis, costis lateralibus versus umbonem squamatis, squamis subremotis, erecto-muricatis; albidā, purpurascens-fusco tinctā et variegatā, interdum intensē crocē; auriculis inæqualibus, plus minus squamatis.*

THE NOBLE PECTEN. Shell nearly orbicular, compressly convex, æquilateral, æquivalve, rayed with two-and-twenty ribs, anterior ribs thinly scaled, interstices finely serrately ridged, lateral ribs scaled towards the umboes, the scales being rather distant and erectly prickly; whitish, tinged and variegated with purplish-brown, sometimes deep saffron-yellow; ears unequal, more or less scaled.

Hab. Moreton Bay, Australia; Strange.

This fine species, from Moreton Bay, is perfectly distinct from any other hitherto known, though not distinguished very strikingly in general aspect.

Species 135. (Mus. Cuming.)

PECTEN LAQUEATUS. *Pect. testā semiglobosā, æquilaterali, valdē inæquivalvi, valvā sinistrā depresso-concavā, in dextrā immersā, concentricē densē striatā, costis octo rotundatis distantibus radiatā, fulvo-rufescente, costis saturatioribus, versus umbonem interruptis; valvā dextrā valdē convexā, ventricosā, costis septem latissimis levibus, costis duabus minoribus ad utrumque latus, interstitiis angustis, profundē excavatis, concentricē striato-scabrosis; albā, maculis perpaucis rufis prope umbonem; auriculis æqualibus.*

THE GUTTERED PECTEN. Shell semiglobose, æquilateral, very inequivalve, left valve depressly concave, im-

mersed in the right valve, concentrically densely striated, rayed with eight rounded distant ribs, fulvous-red, ribs darker red, interrupted towards the umbo; right valve very convex, ventricose, with seven very broad smooth ribs, with two smaller ribs on each side, interstices narrow, deeply excavated, concentrically striately scabrous; white, with a very few red spots near the umbo; ears equal.

SOWERBY, *Thesaurus Conch.* vol. i. p. 46. pl. 15. f. 101.

Hab. California.

Described by Mr. Sowerby, from a single valve, the right one. In the accompanying figure, the left valve, which was not known to him, is the most conspicuous.

Species 136. (Mus. Cuming.)

PECTEN TEGULA. *Pect. testā trigono-orbiculari, altiore quam longā, compressā, subirregulari, viz æquilaterali, inequivalvi, valvā sinistrā costis novem ad tredecim plus minus conspicuē foliaceo-squamatis irregulariter radiatā, dextrā multiliratā, liris obtusis, densē brevissquamatis; purpureo-castaneā, squamis pallidioribus, umbonibus violascentibus; auriculis valdē inæqualibus.*

THE TILE-ROOF PECTEN. Shell triangularly orbicular, higher than long, compressed, rather irregular, scarcely æquilateral, inequivalve, left valve irregularly rayed with nine to thirteen more or less conspicuously foliaceous-scaled ribs, right valve many-ridged, ridges obtuse, densely short-scaled; purple-chestnut, with the scales paler, umboes violet; ears very unequal.

WOOD, *Index Testaceologicus*, Supp. p. 7. pl. 2. *Ostrea*, f. 8.

Hab. Sydney; Strange.

Distinguished from all other Pecten by its irregular foliaceous-scaled *Spondylus*-like growth.



1418



1417



1416



1415



1414



1413



1412



1411



1410



1409

NASSA.

PLATE XXI.

Species 138. (Mus. Cuming.)

NASSA FISSILABRIS. *Nass. testâ ovato-conicâ, obliquâ, cinerascens, pallidè fasciatâ, longitudinaliter costatâ; anfractu ultimo anticè transversim sulcato; columellâ callo expanso, anticè tuberculis duobus transversis, labro incrassato, supernè inciso.*

THE SLIT-LIP NASSA. Shell ovately conical, oblique, ash, faintly banded, longitudinally ribbed; last whorl transversely grooved in front; columella with an expanded callosity, with two transverse tubercles in front, lip thickened, slit at the upper part.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Mindanao, Philippines (in sandy mud at twenty-five fathoms); Cuming.

A rather solid species, with a characteristic *Pleurotoma*-like slit in the lip.

Species 139. (Mus. Cuming.)

NASSA GLAUCA. *Nass. testâ ovato-conicâ, ventricosâ, glaucâ, fasciâ albâ supra suturam; spirâ acutâ, suturâ impressâ; anfractibus longitudinaliter costatis, costis distantibus, transversim tenuistriatis; columellâ basi contortâ et peculiariter sulcatâ, aperturâ parvâ, labro fortiter varicoso.*

THE GLAUCOUS NASSA. Shell ovately conical, ventricose, glaucous, with a whitish band above the suture; spire sharp, suture impressed; whorls longitudinally ribbed, ribs distant, transversely finely striated; columella twisted and peculiarly grooved at the base, aperture small, lip strongly varicose.

C. B. ADAMS, Shells of Panama, p. 61.

Hab. Taboga, Panama.

A strongly marked species, chiefly distinguished for its sutural and basal grooves.

Species 140. (Mus. Cuming.)

NASSA MICANS. *Nass. testâ ovato-fusiformi, fumeo-albâ, nitidissimâ; anfractibus convexiusculis, prope apicem costellatis; columellâ callo tenuissimo, labro basi crenulato, faucè liratâ.*

THE GLITTERING NASSA. Shell ovately fusiform, smoky white, very shining; whorls rather convex, ribbed near the apex; columella with a very thin callosity, lip crenulated at the base, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Mindanao, Philippines (in sandy mud at twenty-five fathoms); Cuming.

A fusiform species, with a shining semifossil aspect.

Species 141. (Mus. Cuming.)

NASSA DORSUOSA. *Nass. testâ ovatâ, depressâ, dorso conspicuè gibboso-tuberculatâ, olivaceâ, lævi, prope apicem longitudinaliter subplicatâ; aperturâ parvâ, columellâ callo peramplio usque ad apicem repando labro crassè juncto.*

THE HUMPED-BACK NASSA. Shell ovate, depressed, conspicuously gibbously tuberculated at the back, olive, smooth, longitudinally subplated at the apex; aperture small, columella with a very large callosity spread to the apex and joining thickly with the lip.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Masbate, Philippines (on mud-banks at low water); Cuming.

Remarkably distinguished for its tuberculated hump and thickly spread callosity.

Species 142. (Mus. Cuming.)

NASSA COSTATA. *Nass. testâ ovato-conicâ; spirâ acutâ, productâ, pallidâ, anfractu ultimo maculâ rufo-fuscâ tincto; anfractibus convexiusculis, longitudinaliter costatis, costis supernè plano-nodatis; columellâ brevilaminatâ, labro simplici, basi crenulato, faucè liratâ.*

THE RIBBED NASSA. Shell ovately conical; spire sharp, produced, pale, last whorl stained with a red-brown spot; whorls rather convex, longitudinally ribbed, ribs flatly noded at the upper part; columella short-laminated, lip simple, crenulated at the base, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Burias, Philippines (in sandy mud at six fathoms); Cuming.

The ribs are close-set and rather flexuous, the spire sharp and erect.

Species 143. (Mus. Cuming.)

NASSA STIMPSONIANA. *Nass. testâ acuminato-conicâ,*



atro-cinerea, lineis albidis interruptis cingulata, longitudinaliter crasse plicato-costata, transversim lirata et subtilissimè striata; aperturà parvâ, columellâ brevilaminatâ, labro crasse varicoso, intus denticulato.

STIMPSON'S NASSA. Shell acuminate conical, black-ash, encircled with interrupted white lines, longitudinally thickly plicately ribbed, transversely ridged and very finely striated; aperture small, columella short-laminated, lip thickly varicose, denticulated within.

Buccinum Stimpsonianum, C. B. Adams, Panama Shells, p. 72.

Hab. Panama (under stones near low-water mark); C. B. Adams.

Encircled with fine ridges, which on crossing the ribs are whitish and look like interrupted lines.

Species 144. (Mus. Cuming.)

NASSA ALBIPUNCTATA. *Nass. testâ ovato-turritâ, pallidâ, fasciis rufescentibus albipunctatis subobscure cinctâ, longitudinaliter costatâ; anfractibus rotundatis, iris tenuibus acutis supernè et infernè cingulatis; aperturâ parvâ, fauce denticulatâ, columellâ brevilaminatâ, labro crasse varicoso.*

THE WHITE-DOTTED NASSA. Shell ovately turreted, pale, rather obscurely encircled with faint reddish-white dotted bands, longitudinally ribbed; whorls rounded, encircled round the upper and lower parts with fine sharp ridges; aperture small, interior denticulated, columella short-laminated, lip thickly varicose.

Hab. —?

A solid conspicuously ribbed shell, distinguished by its faint white-dotted bands.



137.



139.



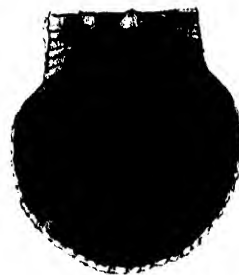
139 a



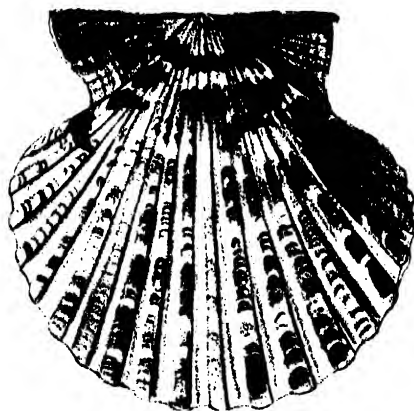
140. a.



139 b



141.



140 b



PECTEN.

PLATE XXXI.

Species 137. (Mus. Cuming.)

PECTEN CIRCULARIS. *Pect. testâ globosâ, ventricosissimâ, æquilaterali, inequivalvi, valvis, dextrâ convexiore, costis levibus fortibus octodecim, interstitiis excavatis, radiatis; cinereo-albâ, griseo-nigro tinctâ et variegatâ; auriculis æqualibus.*

THE CIRCULAR PECTEN. Shell globose, very ventricose, equilateral, inequivalve, valves, right the more convex, rayed with eighteen smooth strong ribs, of which the interstices are excavated; ash-white, stained and variegated with greyish-black; ears equal.

SOWERBY, Proc. Zool. Soc. 1835. p. 110.

Hab. California (in sandy mud at seven fathoms); Cuming.

It is very doubtful whether this is anything more than a variety of *P. nucleus*.

Species 138. (Mus. Cuming.)

PECTEN DENTICULATUS. *Pect. testâ trigono-ovalâ, altiore quam longâ, planulatâ, compressâ, tenui, subpellucidâ, æquilaterali, subæquivalvi, valvis radiatim latis, liris valvæ sinistræ ad quindecim, angustis, alternatim majoribus, squamulis parvis irregularibus, valvæ dextræ pernullis, squamulis minoribus, scabroso-angulatis; auriculis vultu inequalibus, supernè denticulatis; pellucido-lutescente, roseo obsolete tinctâ.*

THE DENTICLED PECTEN. Shell triangularly ovate, higher than long, flattened, compressed, thin, sub-transparent, equilateral, nearly equivalve, valves radiately ridged, ridges of the left valve about fifteen in number, alternately larger, fimbriated with small irregular scales, of the right valve very numerous, with the scales smaller and scabrous-prickly; ears very unequal, denticulated along the upper edge; transparent, yellow, obsoletely tinged with rose.

ADAMS and REEVE, Zool. Voy. Samarang, Moll. p. 74. pl. 21. f. 14.

Hab. Shores of Borneo.

A thin, transparent flatly compressed shell, rayed with numerous fine scabrous-scaled ridges.

Species 139. (Fig. a, b, Mus. Cuming.)

PECTEN FUCATUS. *Pect. testâ suborbiculari, tenuiculâ, subconvexâ, æquilaterali, æquivalvi, valvis costis duodecim rotundatis subnodosis radiatis, costis et præcipuè interstitiis prope marginem latis; albâ, prope marginem carmined aut violacâ; auriculis inæqualibus;*

THE DYED PECTEN. Shell nearly orbicular, rather thin, slightly convex, equilateral, equivalve, valves rayed with twelve rounded subnodose ribs, ribs and especially the interstices ridged near the margin; white, carmine or violet near the margin; ears unequal.

Hab. West Indies.

Of very simple character, but peculiarly distinct from any other described species.

Species 140. (Fig. a, b, Mus. Cuming.)

PECTEN CUMINGII. *Pect. testâ orbiculari, compresso-convexâ, æquilaterali, subæquivalvi, valvis costis rotundatis viginti regulariter radiatis, interstitiis subexcavatis, striis concentricis subtilissimè exsculptis; albâ, violaceo-fusco et aurantio interdum roseo et violaceo variegatâ; auriculis grandibus, æqualibus, aut roseis aut purpureo-fuscis, strigis albis acutè undulatis sæpè notatis.*

CUMING'S PECTEN. Shell orbicular, compressly convex, equilateral, nearly equivalve, valves regularly rayed with twenty rounded ribs, the interstices being excavated and very finely sculptured with concentric striae; whitish, variegated with violet-brown and orange, sometimes with rose and violet only; ears large, equal, rose or purple-brown, often marked with white zigzag streaks.

Hab. Moreton Bay, Australia; Strange.

This fine new species is greatly distinguished for its very rich and beautiful colouring.

Species 141. (Mus. Cuming.)

PECTEN CORNEUS. *Pect. testâ subobliquè ovalâ, subcornuâ, convexâ, inæquilaterali, subæquivalvi, valvis costis plurimis, levibus, irregularibus, radiatis, interstitiis concentricè tenuistriatis; pellucido-albâ, costis hic illic fulvo-corneis; auriculis subæqualibus.*

THE HORNY PECTEN. Shell rather obliquely ovate, rather horny, convex, inequilateral, nearly equivalve, valves rayed with numerous smooth irregular ribs, interstices concentrically finely striated; transparent-white, ribs here and there fulvous-horny; ears nearly equal.

SOWERBY, Thesaurus Conch. vol. i. p. 71. pl. 13. f. 44 and 45, and pl. 20. f. 244 and 245.

Hab. Straits of Magalhaens.

Approximating to the type represented by *P. Patagonicus*, from the same locality.



149^a



150^a



151^a



152^a



153^a



154^a



155^a



156^a



157^a



158^a

NASSA.

PLATE XXII.

Species 145. (Mus. Cuming.)

NASSA ALGIDA. *Nass. testâ orato-conicâ, lævigatâ, nitidâ, olivaceâ, fusco et albo strigatâ et maculatâ; spirâ acutâ, suturâ subimpressâ; anfractibus prope apicem plicatis, ad suturas obsolete rudè plicato-nodosis; columellâ subexcavatâ, callosâ, labro subincrassato, anticè minutè denticulatâ.*

THE CHILLED NASSA. Shell ovately conical, smooth, shining, olive, streaked and blotched with brown and white; spire sharp, suture rather impressed; whorls plaited near the apex, obsoletely rudely plicately noded at the sutures; columella rather excavated, callous, lip rather thickened, minutely denticulated in front.

Hab. Moreton Bay, Australia; Strange.

Of a peculiar livid-olive colour, milk-blotched here and there, and painted longitudinally with waved brown streaks.

Species 146. (Mus. Cuming.)

NASSA CINISULUS. *Nass. testâ ovalâ, subventricosâ, fusco-nigrâ, albo indistinctè zonatâ, longitudinaliter plicato-costatâ, costis liris transversis decussatis; aperturâ parvâ, faucè liratâ, columellâ calloso-laminatâ, labro varicoso.*

THE LITTLE CINDER NASSA. Shell ovate, somewhat ventricose, brown-black, indistinctly zoned with white, longitudinally plicately ribbed, ribs crossed with transverse ridges; aperture small, interior ridged, columella callous-luminated, lip varicose.

Hab. Island of St. Thomas, West Indies.

A subventricose roughly sculptured cinder-black shell, indistinctly zoned round the middle with white.

Species 147. (Mus. Cuming.)

NASSA RUTILANS. *Nass. testâ acuminato-ovalâ, lævigatâ, nitente, cinereo-olivaceo et griseo longitudinaliter variegatâ; spirâ exsertâ, ad apicem tenuiplicatâ; columellâ arcuatâ, parum callosâ, labro crassè varicoso, lævi.*

THE SHINING NASSA. Shell acuminate ovate, smooth, shining, variegated longitudinally with ash-olive and grey; spire exserted, thinly plaited at the apex; columella arched, but little callous, lip thickly varicose, smooth.

Hab. New Zealand.

A hard, smooth, acuminate shell, variegated longitudinally with a promiscuous blending of ash-olive and grey.

Species 148. (Mus. Cuming.)

NASSA STURMII. *Nass. testâ ovato-conicâ, subventricosâ,*

albidâ, fasciâ carulescente, cillâ nigro-fuscâ cingulatâ, longitudinaliter nodoso-plicatâ, nodis obtusis; aperturâ parvâ, columellâ arcuatâ, basi contortâ, parum callosâ, labro simplici.

STURM'S NASSA. Shell ovately conical, subventricose, whitish, encircled with a pale blue band and black-brown fillet, longitudinally nodosely plaited, nodules obtuse; aperture small, columella arched, twisted at the base, but little callous, lip simple.

PHILIPPI, Zeitschrift für Malac. 1848, p. 135.

Hab. West Indies; Philippi.

Of a peculiar pale bluish colour, with a central fillet of black-brown.

Species 149. (Mus. Cuming.)

NASSA BRONNI. *Nass. testâ ovalâ, ventricosâ, crassâ, albidâ, lævi; spirâ brevi, acutâ, suturâ impressâ; anfractibus convexiusculis, superne tumidis et obsolete nodosis; columellâ excavatâ, callo crasso latè repando, labro latè caricoso, anticè denticulatâ.*

BRONN'S NASSA. Shell ovate, ventricose, thick, whitish, smooth; spire short, acute, suture impressed; whorls rather convex, swollen and obsoletely nodose round the upper part; columella excavated, with a thick widely spread callosity, lip broadly varicose, denticulated in front.

PHILIPPI, Zeitschrift für Malac. 1848, p. 137.

Hab. Java.

It is doubtful whether this is anything more than a variety of *N. coronata*.

Species 150. (Mus. Cuming.)

NASSA MELANIODES. *Nass. testâ cylindraceo-ovalâ, tenuiculâ, intensè olivaceâ, intus purpureo-nigrâ, nitente; spirâ subobtusâ; anfractibus lævibus, superne filo-marginatis, prope apicem striatis, ultimo basi sulcato; columellâ subexcavatâ, vix callosâ, basi appresso-contortâ, labro simplici.*

THE MELANIA-LIKE NASSA. Shell cylindrically ovate, rather thin, dark-olive, interior shining purple-black; spire subobtusate; whorls smooth, thread-margined round the upper part, striated near the apex, last whorl grooved at the base; columella rather excavated, but little callous, appressly twisted at the base, lip simple.

Hab. Moreton Bay, Australia; Strange.

This species, like *N. obtusata*, has a characteristic freshwater aspect like that of a *Melania*.

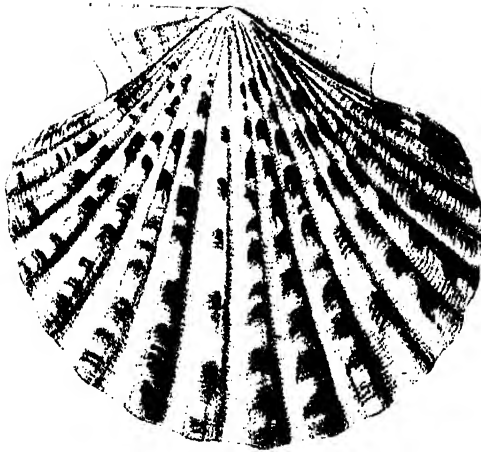




142



144



145.



146.



148



147.



PECTEN.

PLATE XXXII.

Species 142. (Mus. Cuming.)

PECTEN PULCHRELLA. *Pect. testâ subquadrato-orbiculari, compresso-convexâ, subæquivalvi, inæquilateralî, valvis concentricè tenuistriatis, costis lævibus quatuordecim peculiariter obliquè radiatis, interstitiis latiusculis; albida, roseo et violaceo profusè et eximie tinctâ, valvâ dextrâ pallidiore; auriculis grandibus, inæqualibus.*

THE PRETTY PECTEN. Shell somewhat squarely orbicular, compressly convex, nearly equivalve, inequilateral, valves concentrically finely striated, peculiarly obliquely rayed with fourteen smooth ribs, interstices rather broad; whitish, profusely and delicately stained with violet and rose, right valve the paler; ears large, unequal.

Hab. Moreton Bay, Australia; Strange.

A delicate but richly coloured species, rib-rayed in a peculiarly oblique manner.

Species 143. (Mus. Cuming.)

PECTEN CORUSCANS. *Pect. testâ globosâ, valdè convexâ, æquilateralî, inæquivalvi, valvis costis peculiariter acutè tri-liratis viginti radiatis, interstitiis densè scabroso-cancellatis; albida, roseo variè tinctâ et maculata; auriculis inæqualibus.*

THE GLITTERING PECTEN. Shell globose, very convex, equilateral, inequivalve, valves rayed with twenty ribs, which are peculiarly sharply three-ridged, interstices densely scabrous-cancellated; whitish, variuously stained and blotched with rose; ears unequal.

HINDS, Moll. Voy. Sulphur, p. 61. pl. 17. f. 3.

Hab. Port Anna Maria, Nukuhiva, Marquesas Islands (in seven fathoms on a sandy floor); Belcher.

The ribs of this species differ peculiarly in structure from those of any other.

Species 144. (Mus. Cuming.)

PECTEN RUGOSUS. *Pect. testâ ovatâ, æquilateralî, æquivalvi, valvis costis viginti, confertis, brevisquamatis, radiatâ; fulvâ, fusco-nigricante variegatâ; auriculis inæqualibus.*

THE ROUGH PECTEN. Shell ovate, equilateral, equivalve, valves rayed with twenty close-set short-scaled ribs; fulvous, variegated with brown-black; ears unequal.

SOWERBY, Pro. Zool. Soc. 1842.

Hab. Island of Burias, Philippines; Cuming.

A small profusely scaled species, of variegated tortoise-shell-like colouring.

Species 145. (Mus. Cuming.)

PECTEN LEOPARDUS. *Pect. testâ ovatâ, flabelliformi, medio subconvexâ, ad umbones et versus marginem compressâ, æquilateralî, vix æquivalvi, valvis concentricè densè scabroso-striatis, costis sexdecim rotundatis radiatis, costis valvæ sinistræ subangustis distantibus, dextræ latioribus minus distantibus; albâ, costis valvæ sinistræ fulco-ferrugineo tinctis et maculatis; auriculis grandibus, æqualibus.*

THE LEOPARD PECTEN. Shell ovate, fan-shaped, slightly convex in the middle, compressed at the umbones and towards the margin, equilateral, scarcely equivalve, valves concentrically densely scabrous-striated, rayed with sixteen rounded ribs, ribs of the left valve rather narrow and distant, of the right valve broader and less distant; white, ribs of the left valve stained and spotted with fulvous rust; ears large, equal.

Hab. Moreton Bay, Australia.

A very delicate densely striated species, of the same peculiar type as *P. solaris*.

Species 146. (Mus. Cuming.)

PECTEN HYALINA. *Pect. testâ elongato-ovatâ, flabelliformi, tenui, hyalinâ, nilente, vix æquilateralî, æquivalvi, valvis costis decem planulatis superficialibus obsolete radiatis; cinerascens-corneâ, punctis rufis et albis promiscuè aspersâ; auriculis æqualibus.*

THE HYALINE PECTEN. Shell elongately oval, fan-shaped, thin, hyaline, shining, scarcely equilateral, equivalve, valves obsolete rayed with ten flattened superficial ribs; ash-horny, promiscuously sprinkled with red and white dots; ears equal.

POLI, Test. utriusque Sicil. pl. 28. f. 6.

Hab. Mediterranean.

A transparent horny shell, with the ribs so superficial as to be scarcely perceptible.



1001

A



1002



1003



1004



1005



1006



1007



1008



1009



1010

Species 147. (Mus. Cuming.)

PECTEN RUFIRADIATUS. *Pect. testā ovalā, altiore quam longā, tenuiculā, æquilaterali, æquivalvi, valvis costis sex et viginti angustis subacutis nitidè radiatis, costis lateralibus lirā intermediā prope marginem, costis interstitiisque undique subtilissimè crenulatis; pellucido-albā, costis conspicuè rufis; auriculis inæqualibus, sub-obliquis.*

THE RED-RAYED PECTEN. Shell ovate, higher than long, rather thin, equilateral, equivalve, valves neatly rayed with six-and-twenty narrow sharp ridges, lateral ribs with an intermediate ridge near the margin, ribs and

interstices very finely crenulated throughout; transparent-white, ribs conspicuously red; ears unequal, rather oblique.

Hab. Strait of Magalhaens.

Another very characteristic form of the type peculiar to this locality, represented by *P. Patagonicus*.

Fig. 148. (Mus. Cuming.)

This shell proves to be a variety of *P. Strangei* from Moreton Bay, described at Pl. IV. Sp. 22.

NASSA.

PLATE XXIII.

Species 151. (Mus. Cuming.)

NASSA PELLUCIDA. *Nass. testā semiorbiculari, plano-depressā, pellucido-albā, rufo sparsim punctatā; spirā retusissimā; aperturā ovatā, columellā basi contortā, labro simplici.*

THE PELLUCID NASSA. Shell semiorbicular, flatly depressed, transparent white, sparingly dotted with red; spire very blunt; aperture ovate, columella twisted at the base, lip simple.

Cyclope pellucida, Risso, Hist. nat. de l'Europe mérid. p. 271. no. 719.

Cyclope Donoviana, Risso.

Hab. Mediterranean.

This may be only a small subtransparent variety of *N. Neritea*.

Species 152. (Mus. Cuming.)

NASSA MANGELIOIDES. *Nass. testā ovali, solidā, dorso subgibbosā, sordidè cinereā; spirā brevi, acutā; anfractibus supernè tuberculatis, tuberculis hic illic in costas elongatis, interstitiis cancellatis; aperturā minimā, columellā subexcavatā, callo amplo incrassato latè repando labro juncto.*

THE MANGELIA-LIKE NASSA. Shell ovate, solid, rather gibbous at the back, dull ash; spire short, sharp; whorls tuberculated at the upper part, tubercles here and there prolonged into ribs, interstices cancellated; aperture very small, columella rather excavated, with a large thickened broadly spread callosity joined with the lip.

Hab. —?

A very characteristic species, resembling certain species of *Mangelia*, save in the widespread callosity which surrounds the aperture.

Species 153. (Fig. 153 and 156, Mus. Cuming.)

NASSA NERITEA. *Nass. testā semiorbiculari, supra convexā, fulvescente, purpureo-fusco minutè reticulato-lentiginosā; spirā retusissimā, infra concavo-depressā, callosā, luteā; aperturā minimā, columellā basi contortā, labro incrassato.*

THE NERITOS NASSA. Shell semiorbicular, convex above, fulvous, minutely net-freckled with purple-brown; spire very blunt, concavely depressed beneath, cal-

lous, yellow; aperture very small; columella twisted at the base, lip thickened.

Buccinum Neriteum, Linnaeus, Syst. Nat. (12th edit.) p. 1201.

Nassa Neritoides, Enc. Méth.

Nassa Nerita, Schumacher.

Cyclope Neritea, Risso.

Hab. Mediterranean.

This well-known and very singular species is still without any allied forms.

Species 154. (Mus. Cuming.)

NASSA ORBICULATA. *Nass. testā orbiculatā, crassissimā, dorso subgibbosā, laevi, olivaceā; spirā brevi; aperturā minimā, columellā excavatā, callo lato peramplo usque ad apicem crassè repando.*

THE ORBICULAR NASSA. Shell orbicular, very thick, rather gibbous at the back, smooth, olive; spire short; aperture very small, columella excavated, with a very large yellow callosity, thickly spread as far as the apex.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. —?

A truly remarkable species, one-half of the shell being enveloped by the overflowing deposit of enamel forming the callosity.

Species 155. (Mus. Cuming.)

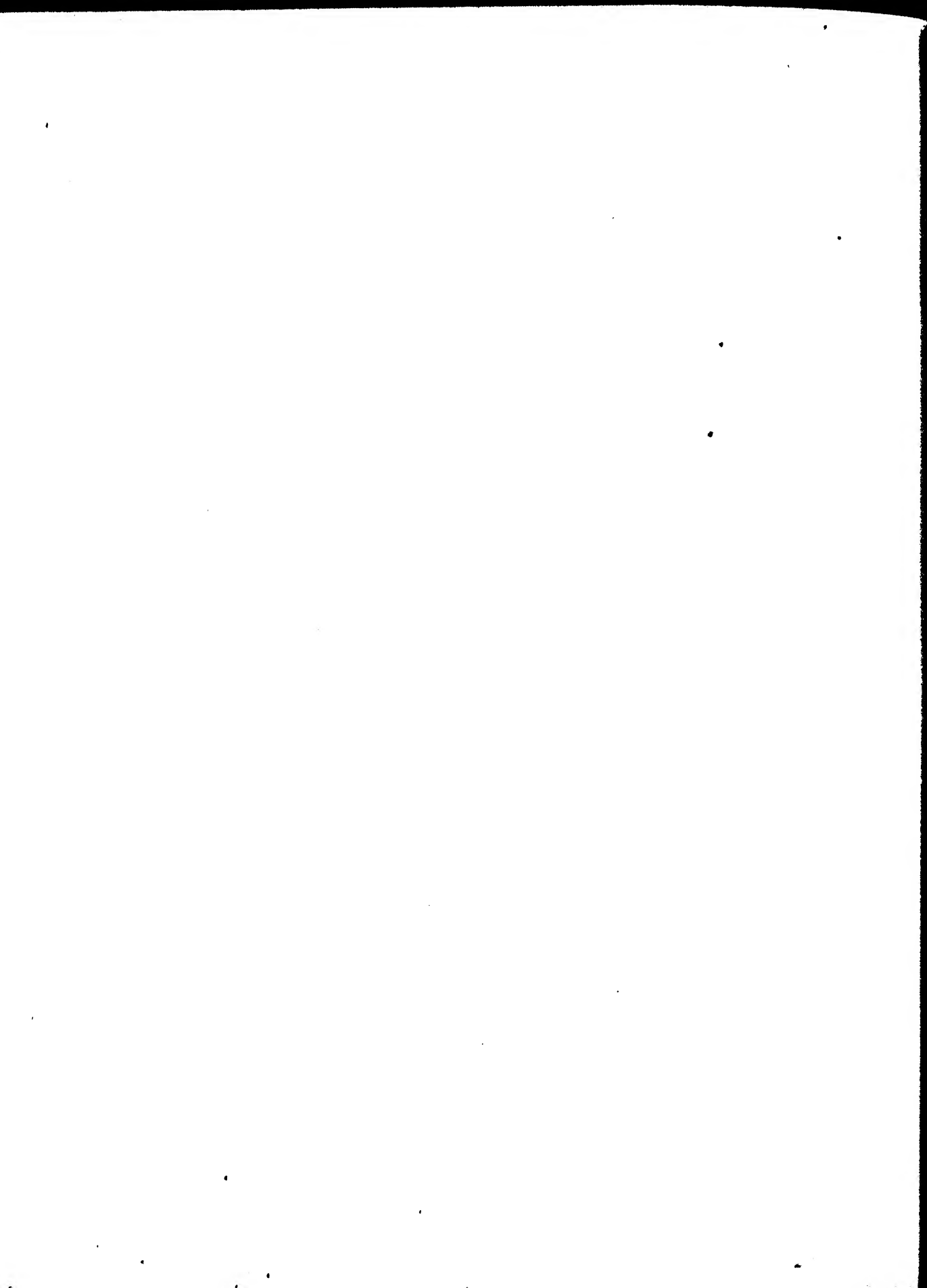
NASSA CANCELLATA. *Nass. testā ovato-conicā, fuscescente, tenui, subpellucidā, fusco hic illic variegatā; spirā acutā; anfractibus longitudinaliter costatā, costis flexuosis, ad suturas subnodosis, interstitiis concinnè cancellatis; columellā excavatā, callo subincrassato repando, labro crassè calloso.*

THE CANCELLATED NASSA. Shell ovately conical, light brown, thin, semitransparent, here and there variegated with brown; spire sharp; whorls longitudinally ribbed, ribs flexuous, rather nodose at the sutures, interstices neatly cancellated; columella excavated, with a rather thick spread callosity, lip thickly callous.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Masbate, Philippines (under stones); Cuming.

Allied in form to *N. Mangelioides*, but thinner and more ventricose.





154.



152^b



155.



154^a.



152^c



156.



157



PECTEN.

PLATE XXXIII.

Species 149. (Mus. Cuming.)

PECTEN CORUSCANS. *Pect. testā suborbiculari, planiusculā, tenui, inæquiariculatā, pallidē violascente, prope umbones strigis parvis lacteis obliquis indutā; valvis convexiusculis, consimilibus, dextrā pallidiore, costis quatuordecim, serratis, argenteo sulcatis, interstitiis sulcatis; auriculis inæqualibus, subtruncato-sulcatis, posticā minimā, obliquā; intus pallescente.*

THE GLITTERING PECTEN. Shell suborbicular, rather flat, thin, unequal-eared, pale violet, covered near the umbones with small oblique white streaks; valves rather convex, very much alike, right valve paler, ribs fourteen, serrated, smartly grooved, interstices grooved; ears unequal, serrately grooved, posterior ear very small, oblique; pale within.

HINDS, Moll. Voy. Sulphur, p. 61. pl. 17. f. 3.

Hab. Port Anna Maria, Nukuhiva, Marquesas Islands (in seven fathoms, on a sandy floor); Belcher.

The specimens in Mr. Cuming's collection, with the above name, being found to represent two distinct species, I propose to substitute for the former, figured in the preceding plate, the name *P. nux*. The description above printed is quoted word for word from Mr. Hinds, as being the type. The description at Sp. 143 is from the shell figured there.

Species 150. (Mus. Cuming.)

PECTEN CROTILUS. *Pect. testā ovatā, altiore quam longā, æquivalvi, subæquilaterali, valvis leviter convexis, liris irregularibus angustis densē minutē squamatis profusē sculptis; intensē purpurascēte-rubrā, sparsim nigropunctatā; auriculis valdē inæqualibus, anticis multo majoribus.*

THE SLENDER PECTEN. Shell ovate, higher than long, æquivalve, nearly equilateral, valves slightly convex, profusely sculptured with densely minutely scaled narrow irregular ridges; deep purplish-red, sparingly black-dotted; ears subequal, the anterior much the larger.

Hab. —?

Of very thin substance, the purplish-red showing deeply through in the interior.

Species 151. (Mus. Cuming.)

PECTEN MUNDUS. *Pect. testā suborbiculari, tenui, compressā, æquilaterali, æquivalvi, valvis costis quatuor et viginti tenuibus leviter crenatis radiatis, lirā minutā intercurrente; aurantio-crocatā; auriculis valdē inæqualibus, anticis majoribus, subexpansis, per marginem squamatis.*

THE NEAT PECTEN. Shell suborbicular, thin, compressed, equilateral, æquivalve, valves rayed with twenty-four thin, slightly crenated ribs, with a minute ridge running between them; bright orange-yellow; ears very unequal, front ears larger, rather expanded, scaled along the edge.

Hab. —?

A thin compressed shell, of very decided regular sculpture.

Species 152. (Fig. a, b, Mus. Cuming.)

PECTEN DRINGI. *Pect. testā trigono-ovatā, altiore quam longā, subobliquā, compressā, inæquilaterali, inæquivalvi, valvis costis octo latiusculis, subdepressis, undique serrato-liratis radiatis; fulvescente, valvā sinistrā interdum rufo-nigro punctatā et variegatā, interdum intensē violacēā, rufo umbones versus maculatā, valvā dextrā pallidiore; auriculis valdē inæqualibus, anticis latē obliquē expansis.*

DRING'S PECTEN. Shell triangularly ovate, higher than long, rather oblique, compressed, inequilateral, inequivalve, valves rayed with eight rather broad, subdepressed ribs, which are everywhere serrately ridged; light fulvous, left valve sometimes dotted and variegated with red-black, sometimes deep violet, blotched with red towards the umbones, right valve paler; ears very unequal, the anterior broadly obliquely expanded.

Hab. Bathurst Island, north-west coast of Australia; Dring.

A light strongly striated species of rather thin substance, somewhat obliquely expanded, with the front ear rather large and flexuous. Colouring extremely variable.

Species 153. (Mus. Cuming.)

PECTEN LINEUS. *Pect. testā orbiculari, compresso-convexā,*

omnibus subnodulosis et pulcherrimē crenu-



161.



162.



163.



164.



165.



166.



167.



168.



169.



170.

latis, radiatis, liris valvæ dextræ lævioribus et plus regularibus; purpurascens-rufâ, subiridescente.

THE RASPBERRY PECTEN. Shell orbicular, compressly convex, equilateral, inequivalve, valves rayed with twelve ribs and numerous ridges, all subnodose, and very beautifully crenulated, ridges of the right valve smoother and more regular; purplish-red, subiridescent.

Hab. — ?

An extremely characteristic species, of a peculiar sub-metallic raspberry colour.

Species 154. (Mus. Cuming.)

PECTEN VESTALIS. *Pect. testâ subtrigono-ovatâ, paululum altiore quam longâ, depresso-convexâ, æquilateralî, sub-æquivalvi, valvis, dextrâ subconvexiore, costis octodecim radiatis, costis triangularibus, confertis, lirâ serrato-squamatâ ad summitatem et in sulco interstitiali; rubescente, punctis roseis aspersâ, ad umbones lutescente; auriculis valdè inæqualibus.*

THE VESTAL PECTEN. Shell somewhat triangularly ovate, a little higher than long, depressly convex, equilateral, nearly equivalve, valves, the right rather the more convex, rayed with eighteen ribs, ribs triangular, close-set, with a serrately squamate ridge along the summit and in the interstitial groove; reddish, sprinkled with rose dots, yellowish at the umbones; ears very unequal.

Hab. West Indies.

Of a delicate blush-red colour, peculiarly angle-ribbed and serrated.

Species 155. (Mus. Cuming.)

PECTEN SOLIDULUS. *Pect. testâ suborbiculari, solidulâ, subplano-gibbosâ, ad latera plano-compressâ, æquilateralî, subæquivalvi, valvis costis viginti subplanulatis confertis radiatis, interstitiis leviter crenulatis; albâ, lateribus et valvâ sinistrâ purpurascens maculatis; auriculis grandibus, subæqualibus.*

THE RATHER SOLID PECTEN. Shell nearly orbicular, rather solid, rather flatly gibbous, flatly compressed at the sides, equilateral, nearly equivalve, valves rayed with twenty rather flattened close-set ribs, the

interstices between which are slightly crenulated; whitish, sides and left valve spotted with light purple; ears large, nearly equal.

Hab. — ?

This has somewhat the appearance of a young *P. gibbosus*, but it is distinct.

Species 156. (Mus. Cuming.)

PECTEN EFFULGENS. *Pect. testâ ovatâ, altiore quam longâ, tenuiculâ, æquivalvi, subæquilateralî, liris numerosis tenuibus multisquamatis undique nitidè radiatâ; aurantio-miniato, purpurascens albi-marginato arcuatim strigatâ; auriculis parvisculis, valdè inæqualibus.*

THE BRIGHT PECTEN. Shell ovate, higher than long, rather thin, equivalve, nearly equilateral, neatly rayed throughout with numerous thin many-scaled ridges; bright orange-vermilion, archedly streaked with light white-edged purple; ears rather small, very inequivalve.

Hab. — ?

Of a bright subtransparent orange-vermilion, profusely finely scaled.

Species 157. (Mus. Cuming.)

PECTEN PUSIO. *Pect. testâ subtrigono-ovatâ, compressiculâ, medio gibbosâ, subæquilateralî, æquivalvi, valvis liris numerosis, acutis, irregularibus, subrudè nodulosis et hic illic squamatis, confertim radiatis; albâ, purpurascens profusè punctatâ; auriculis valdè inæqualibus.*

THE CHILD PECTEN. Shell somewhat triangularly ovate, rather compressed, gibbous in the middle, nearly equilateral, equivalve, valves closely rayed with numerous sharp irregular ridges, somewhat rudely nodulous, and here and there squamate; whitish, profusely dotted with purple; ears very unequal.

Ostrea pusio, Linnæus, Syst. Nat. p. 1146.

Pecten pusio, Lamarck.

Hab. Mediterranean.

This shell, which we take to be quite distinct from *P. varius*, as

NASSA.

PLATE XXIV.

Species 157. (Mus. Cuming.)

NASSA GLABRATA. *Nass. testâ acuminatâ, lævi, politâ, longitudinaliter obsolete striatâ, albâ, fasciis cinerascensibus maculisque fuscis ornatâ; columellâ callosâ, brevilaminatâ, labro subincrassato, margine tenui, flexuoso.*

THE SMOOTH NASSA. Shell acuminate, smooth, polished, longitudinally obsolete striated, whitish, ornamented with ash-bands and brown-spots; columella callous, short-laminated, lip rather thickened, edge thin and flexuous.

Aciculina glabrata, A. Adams, Pro. Zool. Soc. March 1851.
Hab. Philippine Islands; Cuming.

A small smooth polished *Terebra*-like shell.

Species 158. (Mus. Cuming.)

NASSA WILSONI. *Nass. testâ orato-conicâ, purpureo-nigricante, zonatâ lutescente cingulatâ, costis longitudinalibus tirisque tenuibus transversis creberrimè decussatâ; aperturâ parvâ, rotundatâ, fauce denticulatâ, columellâ simplici, labro varicoso.*

WILSON'S NASSA. Shell ovately conic, purple-black, encircled with a narrow yellowish zone, very closely decussated with longitudinal ribs and thin transverse ridges; aperture small, rounded, interior denticulated, columella simple, lip varicose.

C. B. ADAMS, Panama Shells, p. 67.

Hab. Panama.

A small ovate purple-black shell, closely sculptured, encircled with a narrow yellow band.

Species 159. (Mus. Cuming.)

NASSA LABIATA. *Nass. testâ angustè acuminatâ, nitidâ, cinerascens, pallidè fasciatâ, longitudinaliter costatâ, costis ad suturas nodulosis, transversim sulcatâ; aperturâ parvâ, columellâ fusco-laminatâ, labro varicoso, margine tenui, flexuoso, superne sinuato.*

THE LIPPED NASSA. Shell narrowly acuminate, shining, light ash, faintly banded, longitudinally ribbed, ribs nodulous at the sutures, transversely grooved; aperture small, columella brown-laminated, lip varicose, edge thin, flexuous, sinuated at the upper part.

Aciculina labiata, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Malacca (in coarse sand at ten fathoms); Cuming.

Of the same aciculated form as *N. glabrata*, ribbed throughout.

Species 160. (Mus. Cuming.)

NASSA VITTATA. *Nass. testâ acuminatâ, subtorritâ, albâ, nitidâ, vittis fuscis duabus distantibus cingulatâ, longitudinaliter costatâ, costis obtusis, inferne subcravidis, aperturâ parvâ, columellâ brevilaminatâ, labro varicoso.*

THE FILLETED NASSA. Shell acuminate, rather turreted, whitish, shining, encircled with two distant brown fillets, longitudinally ribbed, ribs obtuse, rather fading towards the lower part; aperture small, columella short-laminated, lip varicose.

Aciculina vittata, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Island of Ticao, Philippines (in coral sand at six fathoms); Cuming.

In the filleted bands of this interesting species the spots appear only in the interstices between the ribs.

Species 161. (Mus. Cuming.)

NASSA TEREbroIDES. *Nass. testâ angustè acuminatâ, pallidè purpurascens-roseâ, obscure fasciatâ, transversim linearisulcatâ, longitudinaliter costatâ; aperturâ parvâ, columellâ brevilaminatâ, labro varicoso, intus denticulato.*

THE TEREbra-LIKE NASSA. Shell narrowly acuminate, pale purple-rose, obscurely banded, transversely linearly grooved, longitudinally ribbed; aperture small, columella short-laminated, lip varicose, denticulated within.

Aciculina costata, A. Adams, Pro. Zool. Soc. March 1851.

Hab. —?

An aciculated ribbed species of a semitransparent pinky hue, bordering on *Terebra*.

Species 162. (Mus. Cuming.)

NASSA PUPINOIDES. *Nass. testâ cylindraceo-ovalâ, dense spiraliter striatâ, ad suturas minutè plicatâ, fusciscente,*

fasciâ pallidâ cingulatâ; aperturâ obliquè expansâ, columellâ excavatâ, brevilaminatâ, labro vix incrassato, intus denticulato.

THE PUPINA-LIKE NASSA. Shell cylindrically ovate, densely spirally striated, minutely plaited at the sutures, light brown, encircled with a pale band; aperture obliquely expanded, columella excavated, short-laminated, lip scarcely thickened, denticulated within. *Aciculina striata*, A. Adams, Pro. Zool. Soc. March 1851. *Hab.* Island of Zebu, Philippines (in sandy mud at five fathoms); Cuming.

Distinguished by a peculiar *Pupina*-like aspect, arising mainly from an oblique expansion of the aperture.

Species 163. (Mus. Cuming.)

NASSA DELICATA. *Nass. testâ acuminato-conicâ, semipet- lucido-aurantiâ, versas apicem pallidè rosaceâ, transversim sulcatâ, longitudinaliter flexuoso-costatâ; aperturâ parvâ, columellâ callosâ, labro crassè varicoso, varice albo.*

THE DELICATE NASSA. Shell acuminate conical, semi-transparent orange, tinged with rose towards the apex, transversely grooved, longitudinally flexuously ribbed; aperture small, columella callous, lip thickly varicose, varix white.

Hab. Casces Bay.

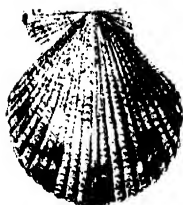
Sculptured with flexuous ribs, cut into nodules by transverse linear grooves.



158.



160.



161.



162^a.



162^b.



163.



164.



165.



166.



PECTEN.

PLATE XXXIV.

Species 158. (Fig. 158 and 165, Mus. Cuming.)

PECTEN LARVATUS. *Pect. testā subtrigono-ovalā, tenuē, subplano-compressā, vix æquilateralī, subæquivalvi, valvis liris numerosis obtusè crenatis, lineisque, densè radiatis; vividè aurantio-crocina, vel nigro mineoque radiatā, lineis perpaucis albis notatā; auriculis valdè inequalibus.*

THE MASKED PECTEN. Shell somewhat triangularly ovate, thin, rather flatly compressed, scarcely equilateral, nearly equivalve, valves thickly rayed with numerous obtusely crenated ridges and lines; bright orange-saffron, or rayed black and vermillion, marked with a few white lines; ears very unequal.

Hab. Philippine Islands.

The ridges and lines are close-set, and very irregular. The colouring, as may be seen by the two specimens here figured, is most variable, but the white zigzag lines are constant.

Species 159. (Mus. Cuming.)

PECTEN SANGUINOLENTUS. *Pect. testā ovalē, compressā, convexiusculā, æquilateralī, æquivalvi, valvis costis parvis octo et viginti profusè brevissquamatīs confertim radiatis; albidā, sanguineo-fusco plus minus tinctā et maculatā; auriculis inequalibus.*

THE BLOOD-STAINED PECTEN. Shell ovate, compressed, rather convex, equilateral, equivalve, valves closely rayed with twenty-eight small profusely short-scaled ribs; whitish, more or less stained and blotched with blood-brown; ears unequal.

Hab.

Peculiarly richly coloured and very profusely five-scaled.

Species 160. (Mus. Cuming.)

PECTEN TESTUDINEUS. *Pect. testā ovalē, æquilateralī, æquivalvi, valvis costis regularibus viginti radiatis, costis confertis, versus marginem conspicuè squamatis; testā fusco-nigro intensè variegatā; auriculis valdè inequalibus.*

THE TORTOISE-SHELL PECTEN. Shell ovate, equilateral, equivalve, valves rayed with twenty regular ribs, ribs close-set, conspicuously scaled towards the margin; deeply variegated with yellow brown-black; ears very unequal.

Hab. Amboyna.

A richly marked species, with very much the appearance of tortoise-shell.

Species 161. (Mus. Cuming.)

PECTEN FRICATUS. *Pect. testā suborbicularī, compressā, medio gibbosiusculā, æquivalvi, æquilateralī, valvis costis quinque vel sex et viginti obtusis, ad latera subacutangulis radiatis, costis tenuiserratis, lateralibus minutè squamatis; albidā, rufescente prope marginem sparsim maculatā; auriculis inequalibus.*

THE RUBBED PECTEN. Shell nearly orbicular, compressed, rather gibbous in the middle, equivalve, equilateral, valves rayed with five- or six-and-twenty obtuse ribs which are rather sharp-angled at the sides, ribs very finely serrated, lateral ribs minutely scaled; whitish, sparingly blotched with red near the margin; ears unequal.

Hab. — ?

The ribs are all more or less arched over with a fine thread of red colour.

Species 162. (Fig. a and b, Mus. Cuming.)

PECTEN BLANDUS. *Pect. testā suborbicularī, compresso-convexā, æquivalvi, æquilateralī, valvis costis ad sex et viginti tenuè serratè-squamatis radiatis, interstitiis angustis, costis lateralibus profusè minutè squamatis; crocinā vel miniacē, saturatè aut pallidè nebulatā; auriculis valdè inequalibus.*

THE ALLURING PECTEN. Shell nearly orbicular, compressly convex, equivalve, equilateral, valves rayed with about six-and-twenty finely serrately squamate ribs, interstices narrow, lateral ribs profusely minutely scaled; saffron or vermillion, clouded darker or lighter; ears very unequal.

Hab. Australia.

The fine scales in this species are sometimes of a compound character.

Species 163. (Mus. Cuming.)

PECTEN DAUCUS. *Pect. testā subobliquè orbicularī, subcentricō, æquivalvi, inequilateralī, valvis costis qua-*

Nassa PL. XXX.



164.



165^a



165^b



166.



167^a



167^b



168.



169^a



169^b



170.

E. Reeve, 1847.

Polynesian Sea, fourth

tuor et viginti peculiariter trifariam divisâ et profusè squamatis radialis; intus extusque intensè purpureo-miniaceo, aurantio-tinctâ, immaculatâ; auriculis inæqualibus.

THE CARROT PECTEN. Shell somewhat obliquely orbicular, rather ventricose, equivalve, inequilateral, valves rayed with four-and-twenty peculiarly three-divided profusely scaled ribs; deep purple vermillion, within and without tinged with orange, unspotted; ears unequal.

Hab. Island of Corfu.

Remarkably deep-toned in colour both within and without.

Species 164. (Mus. Cuming.)

PECTEN RETICULATUS. *Pect. testâ ovalâ, subaltiore quam longâ, convexo-compressâ, æquilaterali, subæquivalvi, valvis costis duabus et viginli lævibus regularibus radiatis; albidâ, maculis purpureo-rufis aspersâ, lineis tenuibus arcuatis undique per costas; auriculis subamplis inæqualibus.*

THE NETTED PECTEN. Shell ovate, rather higher than long, convexly compressed, equilateral, nearly equivalve, valves rayed with two-and-twenty smooth regular ribs; whitish, sprinkled with blotches of purple-red, with arched lines throughout across the ribs; ears rather large, unequal.

Hab. — ?

The painting of this species is similar in design to that of *P. fricatus*, but the shell is quite distinct in form.

Fig. 165. (Mus. Cuming.)

This very characteristic species proves on examination to be a variety of *P. larvatus*, Sp. 168, under which head its peculiarity of colouring is noticed.

Species 166. (Mus. Cuming.)

PECTEN CLOACATUS. *Pect. testâ trigono-ovalâ, sublabeliformi, subventricosâ, æquivalvi, æquilaterali, valvis costis sedecim radiatis, costis elevatis, rotundatis, subnodoso-crenatis, subdistantibus, lateribus interstitiisque excavatis; albâ, cinereo-carneo tinctâ et maculatâ; auriculis inæqualibus.*

THE GUTTERED PECTEN. Shell triangularly ovate, somewhat fan-shaped, rather ventricose, equivalve, equilateral, valves rayed with sixteen ribs, which are raised, rounded, subnodosely crenated and rather distant, with the sides and interstices excavated; white, stained and spotted with ash-flesh colour; ears unequal.

Hab. Philippine Islands.

An extremely characteristic species, quite distinct from any hitherto described.

NASSA.

PLATE XXV.

Species 164. (Mus. Cuming.)

NASSA NANA. *Nass. testā ovatā, lutescente, rufo trifasciatā; spirā breviusculā, acutā; anfractibus convexis, longitudinaliter plicatis, plicis supernè granatis, transversim striatis; columellā culto subamplo, repando, labro crassè varicoso, fauce liratā.*

THE DWARF NASSA. Shell ovate, yellowish, encircled with three reddish bands; spire rather short, sharp; whorls convex, longitudinally plaited, plaits grained at the upper part, transversely striated; columella with a rather large spread callosity, lip thickly varicose, interior ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Negros, Philippines (in coarse black sand at eleven fathoms); Cuming.

A solid red-banded shell, with a rather short spire and moderately spread callosity.

Species 165. (Mus. Cuming.)

NASSA CRENOLIRATA. *Nass. testā ovalē, pallidā, lineis angustis transversis fuscis ornatā, longitudinaliter costatā, costis nodulosis, supernè nodosis; aperturā angustā, fauce valdè liratā, columellā cum callo tenui, labro crassè varicoso.*

THE CRENATED-RIDGED NASSA. Shell ovate, pale, ornamented with narrow transverse brown lines, longitudinally ribbed, ribs nodulous, knotted at the upper part; aperture narrow, interior strongly ridged, columella with a thin callosity, lip thickly varicose.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. —?

A small solid stoutly ribbed species, with very much the general aspect of a *Cancellaria*.

Species 166. (Mus. Cuming.)

NASSA LABECULA. *Nass. testā ovato-conicā, obliquā, pallidè fuscā, anfractu ultimo nigrescente tinctā; spirā breviusculā, acutā; anfractibus costatis, costis supernè tuberculatis, in anfractu ultimo subcanidis; columellā culto subexpanso, labro supernè crassè calloso, fauce dentatā.*

THE BLEMISHED NASSA. Shell ovately conical, oblique, light brown, last whorl stained with blackish; spire

rather short, sharp; whorls ribbed, ribs tubercled at the upper part, somewhat fading in the last whorl; columella with a rather expanded callosity, lip thickly callous at the upper part, interior toothed.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Burias, Philippines (in coral sand at six fathoms); Cuming.

The lip of this species is peculiarly thickened at its junction with the body-whorl.

Species 167. (Mus. Cuming.)

NASSA TESSELLATA. *Nass. testā ovato-conicā, solidiusculā, lutescente-albā, castaneo tessellatim fasciatā; spirā acutā; anfractibus rotundatis, longitudinaliter plicato-costatis, liris nodatis decussatis; aperturā parvā, fauce denticulatā, columellā excavatā, rugoso-callosā, labro varicoso.*

THE TESSELLATED NASSA. Shell ovately conical, rather solid, yellowish-white, tessellately banded with chestnut; spire sharp; whorls rounded, longitudinally plicately ribbed, crossed with noduled ridges; aperture small, interior denticulated, columella excavated, roughly callous, lip varicose.

Hab. —?

The transverse bands of this species appear tessellated, through being omitted, so to speak, in the interstices between the ribs.

Species 168. (Mus. Cuming.)

NASSA ANELLIFERA. *Nass. testā ovato-conicā, subventricosā, lutescente, lineis filosis fuscis fasciatim cingulatā; longitudinaliter plicatā, plicis supernè nodosis, deinde plus minus ecanidis, transversim creberrimè tenuiliratis; aperturā parviusculā, rotundatā, columellā excavatā, callosā, labro crassè varicoso.*

THE RINGED NASSA. Shell ovately conic, subventricose, yellowish, encircled with bands of brown thread-like lines; longitudinally plicated, plaits noduled at the upper part, then more or less fading, transversely very closely finely ridged; aperture rather small, rounded, columella excavated, callous, lip thickly varicose.

Hab. —?



So closely and prominently ridged across, that the shell has the appearance of being encircled with a number of fine rings.

Species 169. (Mus. Cuming.)

NASSA COLLARIA. *Nass. testā acuminato-oratā, albidā, rufescente-fusco latè bifasciatā, longitudinaliter costatā, transversim nodoso-liratā; aperturā parvā, fauce denticulatā, columellā tenuilaminatā, labro conspicuè varicoso.*

THE COLLAR NASSA. Shell acuminate ovate, whitish, broadly two-banded with reddish-brown, longitu-

nally ribbed, transversely nodosely ridged; aperture small, interior denticulated, columella thinly laminated, lip conspicuously varicose.

GOULD, C. B. Adams, Panama Shells, p. 59.

Hab. Panama.

A rough-grained acuminate red-banded shell, with a very prominent varix on the lip.

Fig. 170. (Mus. Cuming.)

A variety of *N. tessellata* represented above, in which the painting is darker and more banded.



169



168



172



171



174



175



PECTEN.

PLATE XXXV.

Species 167. (Mus. Brit.)

PECTEN CONGINNUS. *Pect. testā trigono-ovalā, valvā sinistrā subplanulatā, costis novem rotundatis, valdē elevatis, subdistantibus radiatā, interstitiis subampliter excavatis, costis interstitiisque eleganter minutē squamato-liratis; albidā, costis undique regulariter roseo-maculatis; auriculis inaequalibus.*

THE PRETTY PECTEN. Shell triangularly ovate, left valve rather flattened, rayed with nine rather distant, rounded, very elevated ribs, with the interstices rather largely excavated, ribs and interstices elegantly minutely scale-ridged; whitish, ribs regularly rose-blotched throughout; ears unequal.

Hab. Red Sea.

An elegantly painted and neatly sculptured shell, of which the only specimens known to me are two valves in the British Museum, both left valves.

Species 168. (Mus. Cuming.)

PECTEN ARGENTUS. *Pect. testā suborbiculari, tenui, pellucidā, compresso-convexā, aequilaterali, subaequali, valvis costis decem rotundatis concentricē striatis radialibus, interstitiis latiusculis, decussatim striatis; argenteo-albā, fusco in interstitiis maculatā et punctatā; auriculis aequalibus.*

THE SILVERY PECTEN. Shell nearly orbicular, thin, transparent, compressly convex, equilateral, nearly equal-valve, valves rayed with ten concentrically striated rounded ribs, interstices rather broad, decussately striated; silvery-white, spotted and dotted with brown in the interstices; ears equal.

Hab. China Sea.

A transparent white shell, dotted in the interstices between the ribs with brown.

Species 169. (Mus. Cuming.)

PECTEN TENELLUS. *Pect. testā ovalā, tenniculā, compresso-convexā, aequilaterali, viz aequali, valvis costis quinque levibus radiatis, liris tribus intervenientibus, costā posticā extremā aequā magnā ad marginem; roseā, immaculatā, ad latera albipunctatā; auriculis grandibus, expansis, inaequalibus, ad marginem squamatis.*

THE DELICATE PECTEN. Shell ovate, rather thin, compressly convex, equilateral, scarcely equivalve, valves rayed with five smooth ribs, with three ridges coming between, the extreme posterior rib with a large scale at the margin; pink, unspotted, white-dotted at the sides; ears large, expanded, unequal, scaled along the margin.

Hab. —?

This has the appearance of being an immature shell, but it is, nevertheless, of marked character.

Species 170. (Mus. Cuming.)

PECTEN DENTIGRANOSUS. *Pect. testā trigono-ovalā, subbelliformi, compressā, aequilaterali, inaequali, valvā sinistrā costis lirisque numerosis grandibus et parvis, profusē noduloso-squamatis, subirregulariter radiatā, valvā dextrā ecostatā, undique liratā, squamis brevibus, abrupte nodulosis; purpurascēte-albā, intensē purpureo hic illic linctā et maculatā; auriculis valdē inaequalibus, flexuosis.*

THE SPECKLED PECTEN. Shell triangularly ovate, somewhat fan-shaped, compressed, equilateral, equivalve, left valve somewhat irregularly rayed with numerous large and small ribs and ridges, profusely nodulously scaled, right valve not ribbed, ridged throughout, with the scales short and abruptly nodulous; purplish-white, stained and spotted here and there with deep purple; ears very unequal, flexuous.

Hab. —?

A very characteristic new species, easily recognizable by the details above noted.

Species 171. (Mus. Hinds.)

PECTEN FASCICULATUS. *Pect. testā latē subtrigondā, planiusculā, tenui, inaequauriculatā, rufo-violascente, albo maculatā, valvis consimilibus, costis parvis, numerosis, eleganter serratis, in fascibus quinque plerumque aggregatis, alteris interstitiis suppletis; auriculis inaequalibus, rectis, argutē serratis, dentatis, intus violascentibus.*

THE JUNCHEDED PECTEN. Shell broadly subtriangular, rather flat, thin, unequal-eared, reddish-violet, spotted with white, valves very like, ribs small, numerous, elegantly serrated, generally aggregated in five bunches, the others filling the interstices; ears un-



172.



171^a



172^b



173^a



174^a



174^b



173^b



175^a



178^b

5



176.

equal, straight, sharply serrated, toothed, violet within.

HINDS, Moll. Voy. Sulphur, p. 61. pl. 17. f. 4.

Hab. West coast of Veragua. In seventeen fathoms, among sandy mud; Hinds.

A beautiful and delicate shell, traversed by numerous small finely serrated ribs, a large portion of which are gathered into five bunches or bundles, the others being less aggregated, and occupying the interspaces. The auricles differ in size, and are strongly grooved, with intervening sharp ridges. Within the valves are coarsely ribbed, and of a rich peach-colour.—*Hinds*.

Species 172. (Mus. Hinds.)

PECTEN DIGITATUS. *Pect. testâ subtrigona, planiusculâ, solidâ, æquiauriculatâ, pallidâ, sanguineo transversim nubeculatâ; valvis consimilibus, costis novem rotundatis sulcatis; umbonibus subplanatis, lævigatis; marginibus minutè denticulatis; intus albâ.*

THE FINGERED PECTEN. Shell somewhat triangular, rather flat, solid, equal-eared, pale, clouded transversely with blood-red; valves very like, with nine rounded grooved ribs; umbones rather flat, smooth; margins minutely denticulated; white within.

HINDS, Moll. Voy. Sulphur, p. 61. pl. 17. f. 2.

Hab. Bay of Guayaquil. In twenty-three fathoms, mud; Hinds.

The description and figure of this and the preceding species, which are unknown to me, are copied from the 'Mollusca of the Voyage of the Sulphur.'

Species 173. (Mus. Cuming.)

PECTEN MULTICOSTATUS. *Pect. testâ ovatâ, tenuiculâ, gibbosâ, æquilaterali, æquivalvi, valvis costis triginta angustis subdistantibus, obsolete nodulosis, ad latera subquamulatis radiatis; intensè miniaceâ, immaculatâ, ad umbones albo marmoratâ; auriculis valdè inæqualibus.*

THE MANY-RIBBED PECTEN. Shell ovate, rather thin, gibbous, equilateral, equivalve, valves rayed by thirty rather distant, narrow, obscurely noduled ribs, finely scaled at the sides; deep vermilion, unspotted, mottled with white at the umbones; ears very unequal.

Hab. New Zealand.

A light gibbous deep-coloured shell, rayed with numerous cord-like ribs.

Species 174. (Mus. Cuming.)

PECTEN TEXTILIS. *Pect. testâ ovatâ, subaltiore quam longâ, æquilaterali, subæquivalvi, valvâ sinistrâ planiore, ambabus densè irregulariter liratis, liris undique obtusè squamatis; albâ, vividè aurantio marmoratâ; auriculis valdè inæqualibus.*

THE BROCADED PECTEN. Shell ovate, rather higher than long, equilateral, nearly equivalve, left valve flatter, both valves densely irregularly ridged, ridges obtusely scaled throughout; white, mottled with bright orange; ears very unequal.

Hab. —?

Allied in some respects to *P. pusio*, but differing in form and sculpture.

Species 175. (Mus. Cuming.)

PECTEN OMBONATUS. *Pect. testâ trigono-ovatâ, paululum altiore quam longâ, tenui, æquilaterali, subæquivalvi, valvis liris subtilibus gemmulatis undique pulcherrimè radiatis; pellucido-carneâ, ustulato-spadiceo tinctâ, lineis albis brevibus ad latera sparsim promiscuè notatâ, valvâ dextrâ pallidiore; auriculis valdè inæqualibus.*

THE FINELY-BEADED PECTEN. Shell triangularly ovate, a little higher than long, thin, equilateral, equivalve, valves very beautifully rayed throughout with fine beaded ridges; transparent flesh tinged with burnt fawn-colour, sparingly promiscuously marked at the sides with short white lines; ears very unequal.

Hab. —?

Very delicately and strikingly sculptured.

Species 176. (Mus. Cuming.)

PECTEN TENUIGRANOSUS. *Pect. testâ ovatâ, compresso-convexâ, vix æquilaterali, subinæquivalvi, valvis liris numerosis tenuibus, subtiliter noduloso-squamatis, interstitiis peculiariter densè granulatis, radiatis; valvâ sinistrâ rufo-purpureâ, dextrâ albicante; auriculis valdè inæqualibus.*

THE FINE-GRAINED PECTEN. Shell ovate, compressly convex, scarcely equilateral, rather inequivalve, valves rayed with numerous thin ridges, finely nodulously scaled, interstices peculiarly granulated; left valve reddish-purple, right valve whitish; ears very unequal.

Hab. —?

The sculpture of this species is also peculiar and distinctly marked.

NASSA.

PLATE XXVI.

Species 171. (Mus. Cuming.)

NASSA GENICULATA. *Nass. testā parvā, ovato-conicā, fulvā, albo variegatā, fasciā latā cinereo-fuscā cinctā, transversim striatā, longitudinaliter costatā, costis geniculatis; columellā subcallosā, anticē bituberculatā, labro extus incrassato, intus dentato-lirato.*

THE KNOTTED NASSA. Shell small, ovately conic, fulvous, variegated with white, encircled with a broad ash-brown band, transversely striated, longitudinally ribbed, ribs knotted; columella rather callous, bitubercled; lip thickened outwardly, dentately ridged inwardly.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Island of Ticao, Philippines (in sand at four fathoms); Cuming.

Rather widely ribbed, the ribs being strongly prickly knotted. The last whorl of the specimen here figured is distinguished by a dark livid-ash band.

Species 172. (Mus. Cuming.)

NASSA PUSIO. *Nass. testā parvā, ovato-conicā, fulvā, fusco variegatā et maculosā, costellis planis longitudinalibus confertis ornatā; anfractu ultimo anticē sulcato; columellā cum callo nitido subexpanso lectā, labro intus sulcato, margine subreflexo.*

THE YOUNG NASSA. Shell small, ovately conic, fulvous, variegated and spotted with brown, ornamented with close-set rather flat longitudinal riblets; last whorl grooved in front; columella covered with a rather spread shining callosity; lip grooved within, a little reflected at the edge.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Sorsogon, Island of Luzon, Philippines (in coarse sand, at six fathoms); Cuming.

Very closely obtusely finely ribbed, the ribs having a rather callous aspect.

Species 173. (Mus. Cuming.)

NASSA NIGELLA. *Nass. testā acuminato-ovatā, transversim sulcatā, longitudinaliter granoso-liratā, intus extusque nigello-fuscā; columellā subexpansā, nitidā, labro simplici, extus marginato.*

THE SWARTHY NASSA. Shell acuminately ovate, trans-

versely grooved, longitudinally granosely ribbed, swarthy brown within and without; columella rather expanded, shining, lip simple, margined without.

Hab. New Zealand.

A rather sharply acuminated species, granosely ribbed throughout, the uppermost grains being the most prominent, of a swarthy brown within and without, including the columellar enamel.

Species 174. (Mus. Cuming.)

NASSA SCABRIUSCULA. *Nass. testā ovato-conicā, acuminatā, fuscā, luteo fasciatā, longitudinaliter plicatā, striis elevatis asperis spiraliter cancellatā; aperturā rotundatā; labro externo albo, anticē fusco-maculato, extus marginato, intus valdē sulcato.*

THE ROUGH NASSA. Shell ovately conical, acuminated, banded with brown-yellow, longitudinally plaited, spirally cancellated with rough raised striae; aperture rounded; outer lip white, spotted in front with brown, margined outwardly, inwardly strongly grooved.

POWIS, Pro. Zool. Soc. July 1835.

Hab. Bay of Montija, Central America (dredged from sandy mud at a depth of twelve fathoms); Cuming.

Of rather an elongated form, roughly sculptured throughout, with a small aperture, thickly margined outwardly.

Species 175. (Mus. Cuming.)

NASSA ABYSSICOLA. *Nass. testā parvā, ovato-conicā, sor-didē albā, costellis confertis longitudinalibus permutatis, interstitiis concinnē clathratis, ornatā; columellā arcuatā, mediocriter callosā; labro intus dentato-lirato, extus incrassato.*

THE DEEP-DWELLING NASSA. Shell small, ovately conic, dirty white, ornamented with very numerous close-set longitudinal riblets, the interstices between which are finely latticed; columella arched, slightly callous, lip dentately ridged within, thickened without.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Loay, Island of Bohol, Philippines (dredged from clayey ground at a depth of sixty fathoms); Cuming.

A small colourless species, densely cancellated throughout, with the whorls slightly margined next the sutures.

March, 1854.

PECTEN

| | Plate. | Species. | | Plate. | Species. |
|---------------------------------------|---------|----------|---|---------|----------|
| <i>albo-lineatus</i> , Sowerby | XXIV. | 95 | <i>Fabricii</i> , Philippi | XXIV. | 97 |
| <i>altus</i> , Reeve | XXIX. | 132 | <i>fasciculatus</i> , Reeve | XXXV. | 171 |
| <i>argenteus</i> , Reeve | XXXV. | 168 | <i>filosus</i> , Reeve | XI. | 42 |
| <i>Armoricanus</i> , Chemnitz | XXVIII. | 122 | <i>flabelloides</i> , Reeve | IV. | 21 |
| <i>asper</i> , Sowerby | II. | 10 | <i>flavidulus</i> , Lamarck | XIV. | 53 |
| <i>aspermus</i> , Lamarck | XX. | 75 | <i>flexuosus</i> (<i>Ostrea</i>), Poli | XVI. | 61 |
| <i>asperulatus</i> , Adams and Reeve | XXVI. | 109 | <i>floridus</i> , Hinds | VIII. | 34 |
| <i>aspersus</i> , Lamarck | III. | 13 | <i>fricatus</i> , Reeve | XXXIV. | 161 |
| <i>aspersus</i> , Sowerby | I. | 4 | <i>fucatus</i> , Reeve | XXXI. | 139 |
| <i>aurantiacus</i> , Adams and Reeve | XXVI. | 105 | <i>fulvicostatus</i> , Adams and Reeve | XXVIII. | 123 |
| <i>aurantius</i> , Sowerby | V. | 24 | <i>funcbris</i> , Reeve | XXII. | 85 |
| <i>Australis</i> , Sowerby | XXV. | 103 | <i>fumatus</i> , Reeve | VII. | 32 |
| <i>arthriticus</i> , Reeve | XXVIII. | 119 | <i>fuscus</i> , Klein | VIII. | 35 |
| <i>bifrons</i> , Lamarck | XII. | 45 | <i>gemmens</i> , Reeve | XXXV. | 175 |
| <i>blandus</i> , Reeve | XXXIV. | 162 | <i>gemmaulatus</i> , Reeve | XXVII. | 111 |
| <i>Bornii</i> , Payraudeau | XIX. | 66 | <i>gibbus</i> (<i>Ostrea</i>), Linnæus | IX. | 37 |
| <i>Bruci</i> , Payraudeau | XX. | 72 | <i>glaber</i> , Montagu | III. | 13 |
| <i>circularis</i> , Sowerby | XXXI. | 137 | <i>glaber</i> (<i>Ostrea</i>), Linnæus | XIV. | 53 |
| <i>clavatus</i> , Poli | IV. | 18 | <i>gloriosus</i> , Reeve | XXX. | 134 |
| <i>eloacatus</i> , Reeve | XXXIV. | 166 | <i>griseus</i> , Lamarck | XIV. | 53 |
| <i>concinus</i> , Reeve | XXXV. | 167 | <i>hastatus</i> , Sowerby | XI. | 43 |
| <i>concentricus</i> , Say | VI. | 26 | <i>histrionicus</i> , Gmelin | XXIX. | 130 |
| <i>corallinoides</i> , D'Orbigny | VI. | 27 | <i>hyalina</i> , Poli | XXXII. | 146 |
| <i>corallinus</i> , Chemnitz | III. | 15 | <i>Idæus</i> , Reeve | XXXIII. | 153 |
| <i>cornicus</i> , Sowerby | XXXI. | 141 | <i>imbriatus</i> (<i>Ostrea</i>), Gmelin | XXI. | 79 |
| <i>coruscans</i> , Hinds | XXXIII. | 149 | <i>inaequalis</i> , Sowerby | I. | 1 |
| <i>crassicostatus</i> , Sowerby | XVIII. | 64 | <i>inflatus</i> , Poli | IV. | 18 |
| <i>cretatus</i> , Reeve | XXIX. | 129 | <i>irradians</i> , Lamarck | VI. | 26 |
| <i>cristularis</i> , Adams and Reeve | XXV. | 99 | <i>irregularis</i> , Sowerby | IV. | 19 |
| <i>crotilus</i> , Reeve | XXXIII. | 150 | <i>Isabella</i> , Lamarck | XVI. | 61 |
| <i>cruentatus</i> , Reeve | XIX. | 69 | <i>Islandicus</i> (<i>Ostrea</i>), Müller | XIV. | 52 |
| <i>cuneatus</i> , Reeve | XXIV. | 94 | <i>Jacobæus</i> (<i>Ostrea</i>), Linnæus | X. | 39 |
| <i>cuneolus</i> , Reeve | XXXIX. | 131 | <i>Jamesonii</i> , Smith | III. | 13 |
| <i>Cunningii</i> , Reeve | XXXI. | 140 | <i>Japonicus</i> (<i>Ostrea</i>), Gmelin | XII. | 47 |
| <i>daucus</i> , Reeve | XXXIV. | 163 | <i>laqueatus</i> , Sowerby | XXX. | 135 |
| <i>Danicus</i> , Chemnitz | III. | 13 | <i>larvatus</i> , Reeve | XXXIV. | 158 |
| <i>Darwinii</i> , Reeve | XVII. | 62 | <i>latiauritus</i> , Conrad | I. | 5 |
| <i>denticulatus</i> , Adams and Reeve | XXXI. | 138 | <i>Laurentii</i> , Gmelin | XVI. | 58 |
| <i>dentatus</i> , Sowerby | VII. | 30 | <i>Layardi</i> , Reeve | XXI. | 80 |
| <i>Dieffenbachii</i> , Gray | XXII. | 88 | <i>lemniscatus</i> , Reeve | XXXV. | 170 |
| <i>digitatus</i> , Reeve | XXXV. | 172 | <i>lentiginosus</i> , Reeve | XX. | 76 |
| <i>discors</i> , Chemnitz | XV. | 55 | <i>leopardus</i> , Reeve | XXXII. | 145 |
| <i>distans</i> , Lamarck | XIII. | 49 | <i>leucophaga</i> , Reeve | I. | 6 |
| <i>domesticus</i> , Chemnitz | XXVIII. | 122 | <i>limatula</i> , Reeve | XXVIII. | 124 |
| <i>Dringi</i> , Reeve | XXXIII. | 152 | <i>livida</i> , Lamarck | XIX. | 71 |
| <i>Dunatii</i> , Payraudeau | IV. | 18 | <i>lævis</i> , Pennant | XXVIII. | 122 |
| <i>efulgens</i> , Reeve | XXXIII. | 156 | <i>luculenta</i> , Reeve | XVI. | 59 |
| <i>erubescens</i> , Reeve | XXVIII. | 121 | <i>Madreporarum</i> , Petit | XXVIII. | 117 |
| <i>exasperatus</i> , Sowerby | II. | 7 | <i>Magellanicus</i> (<i>Ostrea</i>), Gmelin | XIII. | 51 |
| <i>excavatus</i> , Anton | VIII. | 33 | <i>magnificus</i> , Sowerby | II. | 9 |
| <i>exoticus</i> , Chemnitz | XVI. | 56 | <i>maximus</i> (<i>Ostrea</i>), Linnæus | IX. | 38 |

Species 176. (Mus. Cuming.)

NASSA CINCTELLA. *Nass. testā ovato-conicā, albidā, lineis fuscis cinctā, longitudinaliter valdē plicatā, plicis distantibus, liris transversis albis, interstitiis fuscis, ornatā; columellā corrugatā, vix callosā, labro extus varicoso, intus valdē lirato.*

THE FINELY GIRDLED NASSA. Shell ovately conic, whitish, encircled with brownish lines, longitudinally strongly plaited, plaits distant, ornamented with white

transverse ridges, the interstices between which are brown; columella wrinkled, slightly callous, lip varicose without, strongly ridged within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. St. Helena (in sandy mud at twenty fathoms).
Cuming.

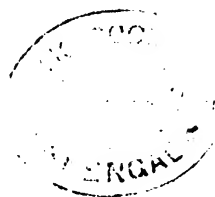
Chiefly distinguished by the deep brownish grooves between the white transverse ridges.

PECTEN.—INDEX.

| | Plate. | Species. | | Plate. | Species. |
|--|---------|----------|---|---------|----------|
| <i>medius, Lamarck</i> | XI. | 44 | <i>saniosus, Reeve</i> | XXXIV. | 159 |
| <i>miles, Reeve</i> | XXV. | 101 | <i>senatorius (Ostrea), Gmelin.</i> ... | XXI. | 81 |
| <i>miniaceus, Lamarck</i> | XXII. | 86 | <i>sentis, Reeve.</i> | XXIX. | 125 |
| <i>mirificus, Reeve.</i> | XXVI. | 104 | <i>sericeus, Hinds.</i> | V. | 23 |
| <i>modestus, Reeve</i> | XI. | 41 | <i>serratus, Sowerby</i> | XII. | 46 |
| <i>mollitus, Reeve.</i> | XXV. | 100 | <i>Sinensis, Sowerby.</i> | VIII. | 33 |
| <i>multicostatus, Reeve.</i> | XXXV. | 173 | <i>Singaporinus, Sowerby</i> | XX. | 74 |
| <i>mundus, Reeve.</i> | XXXIII. | 151 | <i>solaris, Born</i> | XXIII. | 92 |
| <i>muscosus, Wood</i> | XVI. | 60 | <i>solidulus, Reeve</i> | XXXIII. | 155 |
| <i>nasans, Philippi</i> | XXVII. | 113 | <i>Sowerbyi, Guilding</i> | IX. | 37 |
| <i>nebulosus, Brown</i> | III. | 13 | <i>Sowerbyi, Reeve</i> | I. | 4 |
| <i>nobilis, Reeve</i> | I. | 3 | <i>speciosus, Reeve</i> | XXVII. | 112 |
| <i>nodosus (Ostrea), Linnæus</i> | III. | 15 | <i>spectabilis, Reeve.</i> | XXIX. | 128 |
| <i>Novæ-Zelandiæ, Reeve.</i> | VIII. | 36 | <i>spectrum, Reeve</i> | XXIII. | 93 |
| <i>nucleus, Born</i> | XXII. | 89 | <i>spiniferus, Sowerby</i> | XXVIII. | 118 |
| <i>nux, Reeve</i> | XXXII. | 143 | <i>splendidulus, Sowerby</i> | XIX. | 67 |
| <i>obliteratus (Ostrea), Linnæus</i> .. | XIX. | 70 | <i>squamosus, Gmelin</i> | XVIII. | 65 |
| <i>obsoletus, Pennant</i> | XXVIII. | 122 | <i>squamatus (Ostrea), Gmelin</i> .. | XXI. | 82 |
| <i>opercularis (Ostrea), Linnæus</i> .. | XV. | 54 | <i>stellatus, Reeve.</i> | II. | 11 |
| <i>ornatus, Lamarck.</i> | XIX. | 68 | <i>Strangei, Reeve.</i> | IV. | 22 |
| <i>pallium (Ostrea), Linnæus</i> | XVII. | 63 | <i>subnodosus, Sowerby</i> | IV. | 20 |
| <i>parvus, Sowerby</i> | XXIX. | 133 | <i>subplicatus, Sowerby</i> | III. | 17 |
| <i>Patagonicus, King</i> | XXVI. | 110 | <i>subrufus, Turton</i> | X. | 40 |
| <i>pes-anatis, Reeve</i> | VI. | 28 | <i>sugillatus, Reeve</i> | I. | 2 |
| <i>pes-felis (Ostrea), Linnæus</i> | XIX. | 66 | <i>sulcatus, Born</i> | XIII. | 50 |
| <i>pica, Reeve</i> | XXVII. | 115 | <i>superbus, Sowerby</i> | XXVI. | 107 |
| <i>pietus, Sowerby</i> | XXVIII. | 116 | <i>tegula, Wood</i> | XXX. | 136 |
| <i>pleuronectes (Ostrea), Linnæus</i> .. | XIII. | 48 | <i>tenellus, Reeve</i> | XXXV. | 169 |
| <i>plica (Ostrea), Linnæus</i> | III. | 16 | <i>tennigranosus, Reeve</i> | XXXV. | 176 |
| <i>proteus, Solander.</i> | XV. | 55 | <i>testudineus, Reeve</i> | XXXIV. | 160 |
| <i>prunum, Reeve.</i> | XX. | 78 | <i>textilis, Reeve</i> | XXXV. | 174 |
| <i>pseudamysium, Chemnitz</i> | III. | 13 | <i>tigrinus, Müller</i> | XXVIII. | 122 |
| <i>pseudamysium, Klein</i> | XVI. | 56 | <i>tigris, Lamarck.</i> | XX. | 77 |
| <i>pseudo-lima, Sowerby</i> | XVI. | 57 | <i>tinctus, Reeve</i> | XXVI. | 106 |
| <i>pulchella, Reeve</i> | XXXII. | 142 | <i>Tranquebaricus (Ostrea), Gmelin</i> | III. | 14 |
| <i>pulcherrimus, Gray</i> | XXVIII. | 118 | <i>tricarinatus, Anton</i> | II. | 10 |
| <i>purpuratus, Lamarck</i> | V. | 25 | <i>triradiatus, Reeve.</i> | XXVIII. | 120 |
| <i>pusio (Ostrea), Linnæus</i> | XXXIII. | 157 | <i>tumidus, Sowerby.</i> | VII. | 31 |
| <i>pyxidatus, Born</i> | XXIV. | 96 | <i>turgidus, Sowerby</i> | VI. | 26 |
| <i>radula (Ostrea), Linnæus</i> | XXI. | 83 | <i>undulatus, Sowerby</i> | XX. | 73 |
| <i>Reevei, Adams.</i> | XXIII. | 91 | <i>unicolor, Lamarck</i> | V. | 24 |
| <i>reticulatus, Reeve.</i> | XXXIV. | 164 | <i>ustulatus, Reeve</i> | XXII. | 81 |
| <i>roseo-punctatus, Reeve.</i> | XXII. | 84 | <i>varius (Ostrea), Linnæus</i> | XXV. | 102 |
| <i>rubicundus, Chemnitz</i> | IX. | 37 | <i>velutinus, Sowerby</i> | II. | 18 |
| <i>rubidus, Hinds.</i> | XXIII. | 90 | <i>ventricosus, Sowerby.</i> | VII. | 31 |
| <i>rufiradiatus, Reeve</i> | XXXII. | 147 | <i>vestalis, Reeve</i> | XXXIII. | 154 |
| <i>rugosus, Sowerby</i> | XXXII. | 144 | <i>vexillum, Reeve.</i> | XXVII. | 114 |
| <i>russatus, Reeve.</i> | XXIX. | 126 | <i>virgo, Lamarck.</i> | XIV. | 63 |
| <i>sanguineus, Sowerby.</i> | XIX. | 69 | <i>vulgaris, Da Costa</i> | IX. | 38 |
| <i>sanguinolentus (Ostrea), Gmelin</i> | XXIV. | 98 | <i>ziczac (Ostrea), Linnæus</i> | VI. | 26 |

ERRATA.

- Species 134. For *P. nobilis* read *P. gloriosus*. Species 143. For *P. corvaceus* read *P. nux*.
 Species 159. For *P. sanguinolentus* read *P. saniosus*. Species 170. For *P. lentiginosus* read *P.*
 Species 175. For *P. gemmulatus* read *P. gemmeus*.



MONOGRAPH
OF THE GENUS
H I N N I T E S.

' And Seas, immeasurably deep,
Which, in their secret holds, do keep
Treasures unknown to human thought,
Treasures by human hands unsought."—*C. P.*



177



178



178^b



179



180



180^b



181



182^a



182^b



183

NASSA.

PLATE XXVII.

Species 177. (Mus. Cuming.)

NASSA STRIATA. *Nass. testâ elongato-conicâ, albidâ, flavescente tinctâ, fortiter longitudinaliter costatâ, transversim densè cancellato-striatâ; aperturâ parvisculâ, columellâ subrugosâ, labro varicoso.*

THE STRIATED NASSA. Shell elongately conical, whitish, tinged with yellow, strongly longitudinally ribbed, transversely densely cancellately striated; aperture rather small; columella subrugose, lip varicose.

C. B. ADAMS, Panama Shells, Annals Lyceum Nat. Hist. New York, vol. v. p. 289.

Hab. Taboga.

Has somewhat the aspect of a discoloured *N. versicolor*.

Species 178. (Mus. Cuming.)

NASSA NUCLEOLUS. *Nass. testâ conicâ, solidiusculâ, albâ, basî rufo-fuscâ, longitudinaliter costatâ, costis subdistantibus, interstitiis transversim tenuiliratis; aperturâ parvâ, circulari, columellâ tenuirugosâ, labro densè varicoso, intus sulcato.*

THE LITTLE KERNEL NASSA. Shell conical, rather solid, white, red-brown at the base, longitudinally ribbed, ribs rather distant, with the interstices transversely finely ridged; aperture small, circular, columella finely wrinkled; lip thickly varicose, grooved within.

PHILIPPI, MS. in Mus. Cuming.

Hab. —?

A small, rather solid species, distantly ribbed, with a small circular grooved aperture.

Species 179. (Mus. Cuming.)

NASSA LABIDA. *Nass. testâ acuminato-ovatâ, basi truncatâ, pallidâ, sublividâ, nitente, longitudinaliter calloso-costatâ, costis anfractis ultimi tenuibus, numerosis, confertis; columellâ calloso-expansâ, nitente, aperturâ parvisculâ, fauce sulcatâ, labro simplici.*

THE SLIPPERY NASSA. Shell acuminate ovate, truncated at the base, pale, rather livid, shining, longitudinally callously ribbed, ribs of the last whorl fine, numerous, and close-set; columella callously expanded, shining, aperture rather small, interior grooved, lip simple.

Hab. —?

A very characteristic species, sculptured with a profusion of shining callous ribs, which are large and rather distant in the early whorls of the shell, but very numerous and close-set in the last whorl.

Species 180. (Mus. Cuming.)

NASSA DELICATA. *Nass. testâ ovato-conicâ, subpellucidâ, albidâ, fasciâ angustâ fuscâ maculisque fuscis ornatâ, longitudinaliter costatâ, costis planulatis superne nodosis, interstitiis lineis elevatis transversis clathratis; columellâ callosâ, anticè tenuè quadriplicatâ, labro caricoso, intus fortiter lirato.*

THE DELICATE NASSA. Shell ovately conical, subpellucid, whitish, ornamented with a narrow brown band and brown spots, longitudinally ribbed, ribs rather flat, nodose at the upper part, interstices latticed with raised transverse lines; columella callous, with four fine plaits in front, lip varicose, interior strongly ridged.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Sorsogon, Island of Luzon, Philippines (in coarse sand at six fathoms); Cuming.

A short, solid, subtransparent species, sparingly blotched with brown, strongly ribbed.

Species 181. (Mus. Cuming.)

NASSA DENSIGRANATA. *Nass. testâ ovatâ, transversim lineati-sulcatâ, longitudinaliter densè plano-granatâ, albidâ, fuscescente tinctâ et fusco-maculatâ; anfractibus ad suturas plicato-nodulosis; columellâ breviconvolutâ et callosâ, labro simplici.*

THE CLOSE-GRAINED NASSA. Shell ovate, transversely linearly grooved, longitudinally densely flatly grained, whitish, stained with light brown and brown blotched; whorls plicately noded at the sutures; columella short-twisted and callous, lip simple.

Hab. Philippine Islands; Cuming.

A characteristic close-grained species, plicately noded at the sutures, more or less stained throughout with red-brown, and blotched here and there with darker brown.

Species 182. (Mus. Cuming.)

NASSA MADEIRENSIS. *Nass. testâ acuminatâ, transversim*

March, 1854.



NASSA.—PLATE XXVII.

tenuisulcatâ, longitudinaliter costatâ, costis in anfractu ultimo evanidis, flavescente, albo et rufo-fusco subtiliter vittatâ; columellâ callosâ, arcuatâ; aperturâ parvâ, labro simplici, subvaricoso.

THE MADEIRA NASSA. Shell acuminate, transversely finely grooved, longitudinally ribbed, ribs obtuse, fading on the last whorl, yellowish, finely filleted with white and red-brown; columella callous, arched; aperture small, lip simple and faintly varicose.

Hab. Madeira.

An acuminate species, obtusely ribbed, the ribs fading on the last whorl, of a pale yellowish colour, filleted transversely with opaque-white and red-brown.

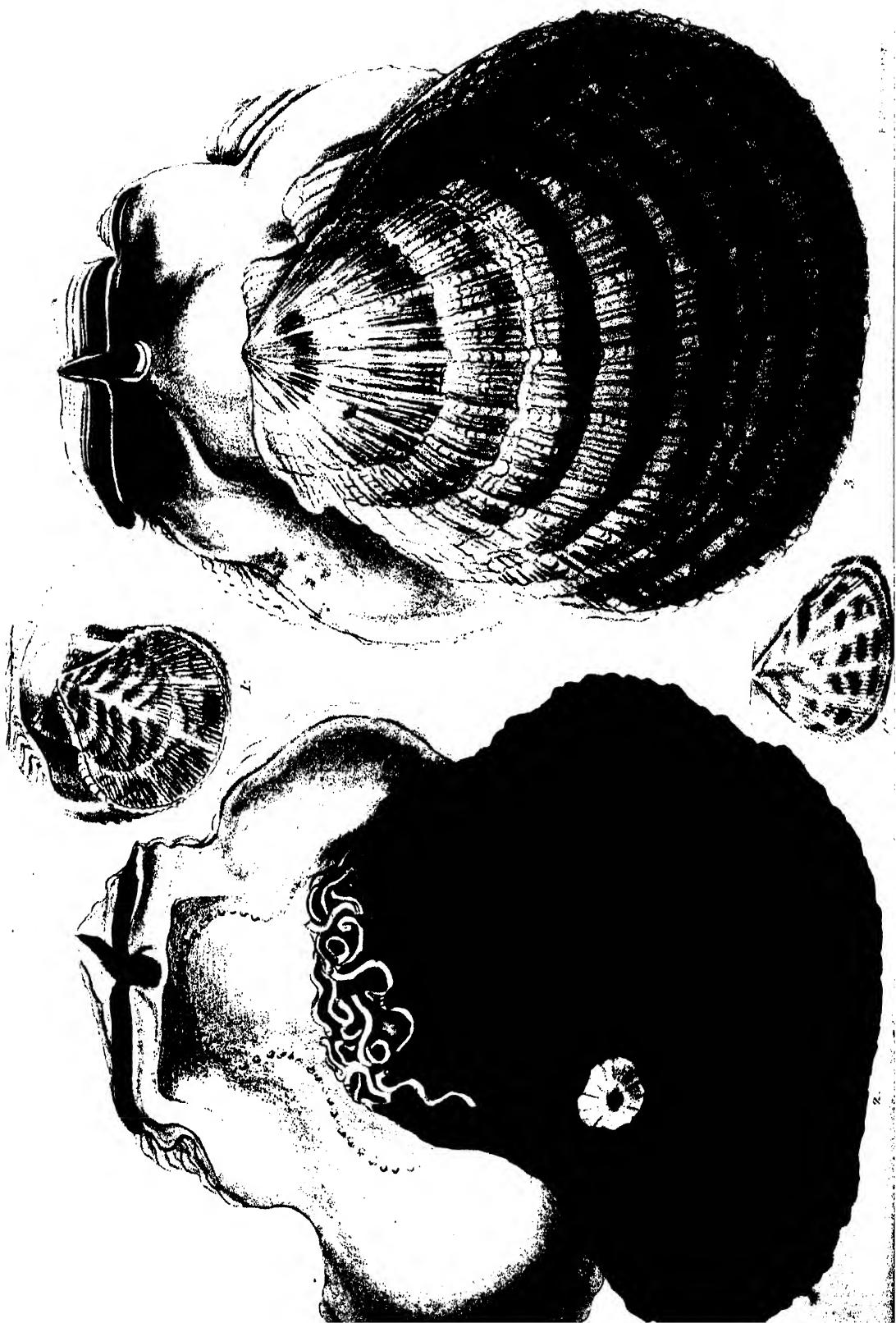
Species 183. (Mus. Cuming.)

NASSA ROSACEA. *Nass. testâ acuminato-ovatâ, transversim sulcatâ, longitudinaliter flexuoso-costatâ, intense roseâ, ad basin nigro-marginatâ; columellâ callosâ; aperturâ parvâ, fauce sulcatâ, labro varicoso, albo.*

THE ROSY NASSA. Shell acuminate, transversely grooved, longitudinally flexuately ribbed, deep rose, black-edged at the base; columella callous; aperture small, grooved in the interior, lip varicose, white.

Hab. — ?

A deep transparent rose shell, flexuately ribbed throughout, turned up with black at the edge of the basal canal.



1964

HINNITES.

PLATE I.

Defrance.

Testa inequivalvis, crassa, subponderosa, valvis vix auriculatis, radiatum liris. Area cardinalis in valvis ambabus lata, edentula, foras subprofundâ oblongâ in medio. Impressio muscularis perampla, sublateralis.

Shell inequivalve, adhering, thick, rather ponderous, valves slightly auriculated, radiately ridged. Hinge area in both valves broad, toothless, with a rather deep oblong pit in the middle. Muscular impression very large, sublateral.

This genus was founded by M. Defrance with two fossil species, and had been received by conchologists, when Mr. Gray discovered that a large bivalve shell in the British Museum, referred by him with a note of doubt to *Lima*, belonged to it. It was in August, 1826, that Mr. Gray announced this discovery in the 'Annals of Philosophy.' The shell which he had described in the same periodical as *Lima? gigantea*, he now referred to the fossil genus of Defrance, altering the generic name, for reasons which we think untenable, to *Hinnite*, and afterwards to *Hinnus*. Another shell of similar generic character turned up in the old collection of Dr. Goodall, and this Mr. Sowerby described as *Hinnites corallinus* in the third volume of the 'Zoological Journal.' M. Deshayes and Mr. Sowerby, by reason of the peculiarity of its mode of attachment, referred the *Ostrea* (*Pecten*) *sinuosus*, which is probably identical with the Linnean *Ostrea* (*Pecten*) *pugio*, to Defrance's genus, but the relationship has not been confirmed by subsequent researches. Messrs. Forbes and Hanley have shown, in their 'History of British Mollusca,' that this *Pecten* lives free when young, and merely attaches itself in the adult state. The shell then takes an irregular form of growth, still preserving its generic characters. The *Pecten pugio* is represented in the accompanying plate in the state in which it has been called *Ostrea* and *Hinnites sinuosus*, but inasmuch as it does not possess the broad, solid, cardinal area and heavy *Spondylus*-like character of *Hinnites*, it should not be included in the genus.

Hinnites has more of the general character of *Spondylus* than of *Pecten*, but the hinge is distinct, being without teeth, and produced into an area equally in both valves. One of the species inhabits the Old World, and the other the New.

Species 1. (Fig 2. Mus. Brit.)

HINNITES CORALLINUS. *Hinn. testâ sublabelli-formi, flexuosa, valdè irregulari, areâ cardinali subangustâ; rubeo scabroso-lirata, subfimbriatâ; intensè corallio-rubra.*

THE CORAL HINNITES. Shell somewhat fan-shaped, flexuous, very irregular, cardinal area rather narrow; rudely scale-ridged, subfrilled; deep coral-red.

SOWERBY, Zool. Journ. vol. iii. p. 71.

Hab. East Africa; Sowerby.

The outer surface of this specimen is very much broken and worm-eaten, but very characteristic, both in respect of sculpture and colour. The interior is remarkable for its conspicuous muscular impression, the surface being sculptured with a strong venous net-work.

Species 2. (Fig. 3. Mus. Brit.)

HINNITES GIGANTEUS. *Hinn. testâ ovalâ, convexâ, radiatim scabroso-liratâ, liris prope umbones levibus, nitidè binis; aurantio-rufescente, vel albidâ, intus albâ, prope cardinem vividè purpureo-violacèâ.*

THE GIGANTIC HINNITES. Shell ovate, convex, radiately scabrous-ridged, smooth and neatly disposed in pairs near the umbones; orange-red, or whitish, interior white, stained with rich purple-violet near the hinge.

GRAY, Annals of Philosophy, 2nd Series, vol. xii. p. 103.

Hab. California and Straits of Juan Fernandez.

The ridges of this species, which is of more convex oblong growth than the preceding, are here and there at nearly equal distances larger. One of the principal characteristics of the species is the deep purple-violet colouring of the hinge.

Nassa. PL. XXVIII.



185^a



185^b



185^c



186^a



187^a



187^b



186^b



188^a



188^b



189

NASSA.

PLATE XXVIII.

Species 184. (Mus. Cuming.)

NASSA BELLULA. *Nass. testā ovatā, spirā acuminatā, acutā; anfractibus angulatis, pallidulā, fasciā luteolā ornatā, longitudinaliter plicatā, transversim liratā, intersitiis concinnè longitudinaliter striatis; columellā rugosā, callo magno expanso tecto, labro margine rugoso calloso, intus crenulato.*

THE PRETTY NASSA. Shell ovate, spire acuminated, sharp, with the whorls angled, pale, ornamented with a yellowish band, longitudinally plaited, transversely ridged, interstices neatly cancellately striated; columella rough, with a large expanded callosity, lip with a rough callous edge, crenulated within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Catbalonga, Island of Samar, Philippines (under stones at low water); Cuming.

An elaborately sculptured species, callous in front, having somewhat a *Mangelia*-like aspect.

Species 185. (Mus. Cuming.)

NASSA CALLOSA. *Nass. testā parvā, ovatā, spirā acutā, albā, fusco-maculatā, longitudinaliter costatā, transversim sulcatā; columellā anticè triplicatā, callo magno albo nitido expanso, labro margine incrassato, calloso, intus dentato-lirato.*

THE CALLOUS NASSA. Shell small, ovate, sharp at the spire, white, spotted with brown, longitudinally ribbed, transversely grooved; columella three-plaited in front, with a large white shining expanded callosity, lip thickened and callous at the edge, dentately ridged within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. Bais, Isle of Negros, Philippines (in sandy mud at seven fathoms); Cuming.

A very small species, distinguished by a largely expanded shining callosity in front.

Species 186. (Mus. Cuming.)

NASSA NOVÆ-ZELANDIÆ. *Nass. testā acuminato-conicā, nigro fuscoque marmoratā; spirā acutā, suturā impressā; anfractibus supernè subangulatis, transversim lineari-sulcatis, longitudinaliter fortiter grano-costatis; columellā contortā, albā, labro tenui, varicoso.*

THE NEW ZEALAND NASSA. Shell acuminately conical, mottled black and brown; spire sharp, with the suture impressed; whorls slightly angled at the upper part, transversely linearly grooved, longitudinally strongly grain-ribbed; columella twisted, white, lip thin, varicose.

Hab. New Zealand.

Of the same typical character as *N. labida*, from the same locality, but more prominently grained and more angulated about the suture.

Species 187. (Mus. Cuming.)

NASSA AMBIGUA. *Nass. testā acuminato-turritā, fulvescente, rufo sparsim maculatā; spirā acutā, subexsertā; anfractibus rotundatis, longitudinaliter prominentè costatis, liris tenuibus cingulatis; columellā tenuè corrugatā; aperturā parvā, circulari, labro varicoso, albo.*

THE DOUBTFUL NASSA. Shell acuminately turreted, light fulvous, sparingly blotched with red; spire sharp, rather exserted; whorls rounded, longitudinally prominently ribbed, encircled with five ridges; columella finely wrinkled; aperture small, circular, lip varicose, white.

Buccinum ambiguum, Montagu, Test. Brit. pl. 9. f. 7.

Hab. Mediterranean and English Channel.

A delicate transparent fulvous species, spotted here and there, but chiefly near the suture, with brown-red, prominently decussated with longitudinal ribs and cross ridges.

Species 188. (Mus. Cuming.)

NASSA SANCTÆ HELENÆ. *Nass. testā ovato-conicā, sub-turritā, albidā, rufo-variegatā; spirā productā; anfractibus rotundatis, longitudinaliter costatis, costis distantibus subnodosis, anfractu ultimo anticè transversim sulcato; columellā laevi, calloso, anticè uniplicatā, labro intus lirato.*

THE SAINT HELENA NASSA. Shell ovately conical, sub-turreted, white, variegated with red; spire produced; whorls rounded, longitudinally ribbed, ribs distant, rather nodose, last whorl transversely grooved in front; columella smooth, callous, one-plaited in front, lip ridged within.

A. ADAMS, Pro. Zool. Soc. March 1851.

March, 1854.

MONOGRAPH
OF THE GENUS
M A C T R A.

‘Of sea-born kinds, ten thousand thousand tribes
Find endless range for pasture or for sport.’—*Mallet.*

Hab. St. Helena (in sandy mud at twenty fathoms);
Cuming.

Allied to the European form of *Nassa*, represented by the preceding species.

Species 189. (Mus. Cuming.)

NASSA CORTICATA. *Nass. testā ovato-conicā, spirā productā, epidermidē viridi-fuscā oblectā; anfractibus superne nodosis, ultimo antice cingulā subnodosā ornato, posticē nodulis coronato; columellā vix callosā, antice biplicatā, labro extus marginato, intus lirato.*

THE BARK-COVERED NASSA. Shell ovately conic, produced at the spire, covered with a greenish-brown epidermis; whorls nodose at the upper part, last whorl ornamented in front with a subnodose belt, posteriorly coronated with nodules; columella but little callous, two-plaited in front, lip margined outwardly, ridged within.

A. ADAMS, Pro. Zool. Soc. March 1851.

Hab. New Zealand.

A distinct typical form of *Nassa*, covered with a thick dark olivaceous epidermis.





121



122



123



124



125



126



127



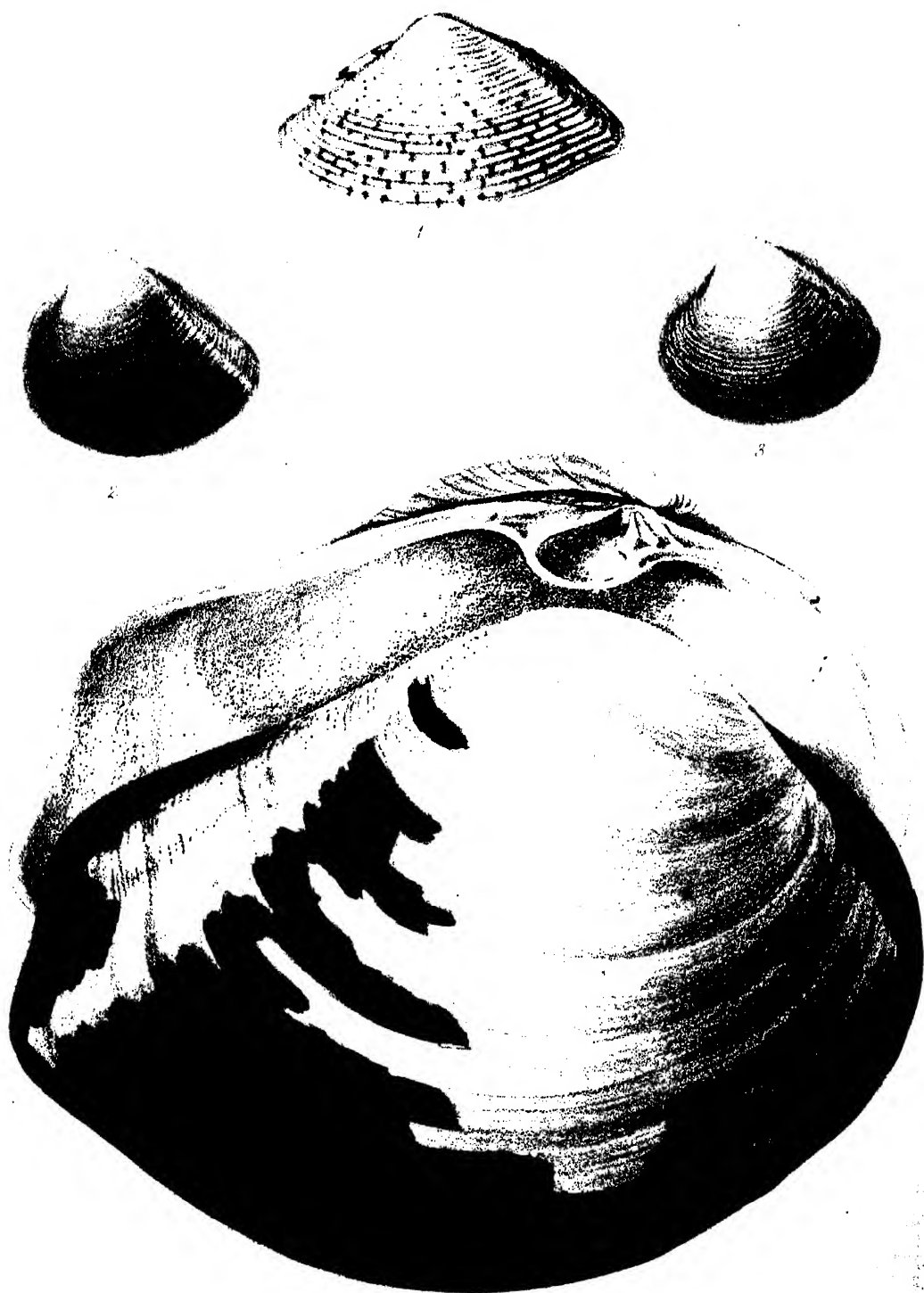
128



129



130



NASSA.

PLATE XXIX.

Species 190. (Mus. Cuming.)

NASSA RINGENS. *Nass. testā ovatā, fusco-aurantiā; spirā breviusculā, suturā angulato-impressā, basi peculiariter contortā et contractā; anfractibus convexis, undique nodoso-reticulatā; columellā arcuatā, verrucosā; aperturā parvā, faucē verrucoso-liratā, labro simplici, supernè appresso.*

THE GRINNING NASSA. Shell ovate, brownish-orange; spire rather short, angularly impressed at the sutures, peculiarly twisted and contracted at the base; whorls convex, nodosely reticulated throughout; columella arched, warty; aperture small, interior wart-ridged, lip simple, appressed at the upper part.

Desmoulea ringens, A. Adams, MS. in Mus. Cuming.

Hab. ———?

The species represented in this Plate constitute Mr. Gray's genus *Desmoulea*, and form a very natural and interesting group.

Species 191. (Mus. Cuming.)

NASSA PYRAMIDALIS. *Nass. testā ovato-conicā, pallidē aurantiā; spirā acuminatā, apice obtuso, violascente; longitudinaliter evanidè plicatā, transversim sulcatā; columellā fuscā, subcallosā, simplici, labro extus marginato, intus lirato.*

THE PYRAMIDAL NASSA. Shell ovately conical, pale orange; spire acuminate, apex obtuse, violet-tinged; longitudinally faintly plaited, transversely grooved; columella brown, rather callous, simple, lip margined outwardly, ridged within.

Desmoulea pyramidalis, A. Adams, Pro. Zool. Soc. March 1851.

Hab. ———?

The typical character of the spire in this group is to be short and obtuse, but in this species the spire is acuminate.

Species 192. (Mus. Cuming.)

NASSA JAPONICA. *Nass. testā ovatā, lævi, nitidā, anticè transversim sulcatā, fulvescente, maculis lineisque transversim fuscis ornatā, albo variegatā; columellā callosā, anticè tuberculis tribus instructā, labro extus incrassato, intus lirato.*

THE JAPAN NASSA. Shell ovate, smooth, shining, transversely grooved in front, light fulvous, ornamented with brown transverse spots and lines, variegated with white; columella callous, furnished with three tubercles in front, lip thickened without, ridged within.

Desmoulea Japonica, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Japan; Dr. Siebold.

Less acuminate than the preceding species, though partaking of its form. There is generally a small wart-like callosity on the body-whorl at the upper part of the aperture.

Species 193. (Mus. Cuming.)

NASSA PINGUIS. *Nass. testā globosā, abbreviatā, ventricosā, lutescente, albo variegatā, epidermide fuscā villosā lectā; spirā brevi, ad suturam impressā, apice mucronato; anfractibus gibbosis, transversim striatis; columellā lævi, callosā, anticè tuberculo unico, uniplicatā, labro intus lirato.*

THE PLUMP NASSA. Shell globose, short, ventricose, variegated with yellow and white, covered with a brown hairy epidermis; spire short, impressed at the suture, apex sharp-pointed; whorls gibbous, transversely striated; columella smooth, callous, with a single tubercle, one-plaited in front, lip ridged within.

Desmoulea pinguis, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Senegal.

A peculiarly globose species, with an impressed suture and raised pointed apex.

Species 194. (Mus. Cuming.)

NASSA ABBREVIATA. *Nass. testā globosā, ventricosā, albescente vel castaneā, albo et fulvo fasciatā, transversim lirata; spirā brevi; suturā canaliculatā; aperturā albā, subrotundatā, labro columellari tenui, expanso, arcuato et rugoso, labro externo simplici, intus fortiter lirato.*

THE SHORTENED NASSA. Shell globose, ventricose, whitish or chestnut, banded with white and fulvous, transversely ridged; spire short; suture channelled; aperture white, nearly round, columellar lip thin, ex-

March, 1854.

MACTRA.

PLATE I.

Genus *MACTRA*, *Linnaeus*.

Testa ovato-trigona vel transversa, lateribus paulisper hians; umbonibus prominentibus. Dens cardinalis in utraque valvâ compressus, plicato-caniculatus, cum adjectâ foveolâ intus prominulâ. Dentes laterales duo compressi, utrinque prope cardinem inserti; ligamentum internum, in foveolâ cardinali insertum.

Shell ovately triangular or transverse, a little gaping at the sides; umboes prominent. Cardinal teeth in each valve compressed, plicately channelled, with the interlying pit rather prominent within; two lateral compressed teeth inserted on each side near the hinge; ligament internal, inserted in the hinge pit.

There is no genus of bivalves which it is more easy to determine than *Mactra*. The shell has, with little variation, a characteristic triangular form, more or less transversely ovate or oblong; and the hinge is distinguished by a prominent central triangular tooth in one valve, which closely interlocks in a corresponding pit in the opposite valve. The *Mactrae* are mostly void of colour, but some are very prettily tinged and rayed with rose or purple. In sculpture they are also deficient, compared with the *Tellinidae* or *Veneridae*, having seldom more than concentric grooves and striae or plait-like ridges. The anterior or front half of the shell is, with few exceptions, the shorter, and this is sometimes concentrically grooved and striated while the posterior side is smooth. Beneath the umboes on the anterior side a neat heart-shaped lunule is generally formed, and the striae of the valves mostly converge on the shield of this in a more regular and elegantly developed state. On the posterior side the ligamentary area is more broadly spread, and mostly angled on each side. Some of the *Mactrae*, more especially those inhabiting the Northern Seas, are ponderous and *Mya*-like; the majority of the species inhabiting the tropical seas are thin, some almost transparent, and most elegantly wave-wrinkled and striated. The localities noted in the following monograph will show that the genus is pretty evenly distributed over the globe, from the Arctic Seas along both sides of the African continent to Van Diemen's Land in the eastern hemisphere, and from the North American Seas to Panama and Columbia in the western.

Lamarck enumerated about thirty species in his *Anim. sans vert.*, but several have been described subsequently by different authors, and the genus has lately undergone

a complete revision by M. Deshayes, who has been staying in this country for the purpose, while assisting in the arrangement of Mr. Cuming's and our national collections. The species are brought ~~up~~ in the present monograph to a hundred and twenty-five in number. It will be seen that several well-marked groups are included in this number, all belonging to the Lamarekian genus *Mactra*, but denominated as genera by the more advanced conchologists, under the names of *Mulinia*, *Schizodesma*, *Cypricia*, *Raeta*, *Standella*, *Spisula*, etc., as will be seen by the synonyms.

Species 1. (Mus. Brit.)

MACTRA TRIANGULARIS. Mact. testâ trigono-elongatâ, compressâ, solidâ, inæquilaterali, latere antico paulo brevior, ambobus compresso-acuminatis, transversim plicato-liratâ, fuscescente-albâ, maculis fusciscentibus parvis sparsim aspersâ; umbonibus parvis, angularibus, approximatis; lunulâ areâque peramplis, lanceolato-ovatis, medio elevatis, fusco-strigatis.

THE TRIANGULAR *MACTRA*. Shell triangularly elongated, compressed, solid, inequilateral, anterior side a little the shorter, both sides compressly acuminate, transversely plicately ridged, brownish-white, sparingly sprinkled with small brown spots; umboes small, angular, approximated; lunule and area very large, lanceolately ovate, raised in the middle, streaked with brown.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vi. p. 103. Enc. Méth. pl. 253. f. 3 a, b, c.

Spisula triangularis, Gray.

Hab. — ?

An extremely rare species, of a peculiarly triangularly elongated wedge-shape, sprinkled with small red-brown spots.

Species 2. (Mus. Cuming.)

MACTRA VENERIFORMIS. Mact. testâ orbiculato-subtrigona, inflatâ, convexissimâ, cordiformi, subæquilaterali, anticâ obtusâ, posticâ longiore, angulatâ, transversim regulariter striatâ, ad umbones lævigatâ, equalidè albâ vel griseâ, posticè intus extusque violaceo-tinctâ; umbonibus tumidis, prominentibus, obliquè cordatis; lunulâ areâque latis, ovatis, regulariter plicatis; sinu pallii lato, subsemicirculari.

panded, arched, and rugose, outer lip simple, strongly ridged within.

Buccinum abbreviatum, Wood, Index Test. Bucc. No. 12. Chemnitz, Conch. Cab. pl. 153. f. 1464 and 1466.

Desmoulea abbreviata, Gray.

Hab. Cape of Good Hope.

This singular species partakes of the character of *Cassis*, and is the most abnormal form of the genus.

Species 195. (Mns. Cuming.)

NASSA RETUSA. *Nass. testā abbreviato-ovalā, transversim minutissimè striatā, luteo-rubente; spirā brevi, turgidā, apice retusā; aperturā albā, infernè dilatatā, labro intus striato.*

THE BLUNT NASSA. Shell abbreviately ovate, transversely very minutely striated, yellow-red; spire short, swollen, blunt at the apex; aperture white, dilated at the upper part, lip striated within.

Buccinum retusum, Lamarek, Anim. sans vert. (Deshayes' edit.) vol. x. p. 168.

Nassa retusa, Deshayes.

Desmoulea retusa, Gray.

Hab. West Africa.

The suture of this species is generally white, dotted with red-brown, and the shell is encircled with two or more very delicate narrow brown and white fillets.

Species 196. (Mus. Cuming.)

NASSA PONDEROSA. *Nass. testā globosā, solidā, lævi; spirā obtusā, apice violaceā; anfractibus supernè gibbosis, albā, fulvo-rufescente variegatā, transversim striatā; columellā callosā, tenuè corrugatā, labro calloso-incrassato, intus lirate.*

THE HEAVY NASSA. Shell globose, solid, smooth; spire obtuse, violet at the apex; whorls gibbous at the upper part, white, variegated with fulvous-red, transversely striated; columella callous, finely wrinkled, lip callously thickened, ridged within.

Desmoulea crassa, A. Adams, Pro. Zool. Soc. March 1851.

Hab. Japan.

A very solid globose species, encircled with numerous hair lines of red-brown, besides being stained and variegated with the same colour.

THE VENUS-SHAPED MACTRA. Shell orbicularly subtriangular, inflated, nearly convex, heart-shaped, nearly equilateral, anteriorly obtuse, posteriorly angled, transversely regularly striated, smooth at the umboes, dirty-white or grey, posteriorly violet-tinged within and without; umboes swollen, prominent, obliquely cordate; lunule and area broad, ovate, regularly plaited; sinus of the mantle broad, subsemicircular.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China Sea and Japan.

A tumid heart-shaped species, approaching to the form of *Gnathodon*.

Species 3. (Mus. Cuming.)

MACTRA QUADRANGULARIS. *Mact. testâ ovato-subquadrangulâri, tenui, tumidâ, cordiformi, subæquilaterali, transversim plicato-lirâ, squalidè griseâ, epidermide flavescente tenuissimâ indutâ, latere antico subtruncato, lato, posticum subæquante; umbonibus tumidis, obliquè cordatis, approximatis; lunulâ areâque indistinctis, eleganter plicatis; sinu pallii brevi, subtrigono, apice obtuso.*

THE QUADRANGULAR MACTRA. Shell ovately subquadrangular, thin, swollen, heart-shaped, nearly equilateral, transversely plicately ridged, dirty-grey, covered with a very thin yellowish epidermis, anterior side slightly truncated, broad, nearly equal to the posterior; umboes swollen, obliquely cordate, approximated; lunule and area indistinct, elegantly

plicated; sinus of the mantle short, subtriangular, obtuse at the top.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China.

A thin *Cardium*-like species, neatly ridged across, except in the vicinity of the umboes, which are smooth.

Species 4. (Mus. Brit.)

MACTRA MAXIMA. *Mact. testâ peramplius inflatâ, ovato-subrhombâ, inæquilaterali, transversim striatâ et rugosâ, albâ, epidermide nigro-fuscâ marginem versus indutâ, anticè angustè hiantè, posticè latissimè hiantè; umbonibus magnis, obtusis, approximatis; sinu pallii lato, profundo, horizontali.*

THE VERY LARGE MACTRA. Shell very largely inflated, ovately subrhomboidal, inequilateral, transversely striated and rough, whitish, covered towards the margin with a black-brown epidermis, anteriorly narrowly gaping, posteriorly very broadly gaping; umboes large, obtuse, approximated; sinus of the mantle broad, deep, horizontal.

Lutraria maxima, Middendorf, Malac. zool. Russ. part 3 pl. 66. pl. 19. f. 1-4.

Lutraria inflata, Dunker.

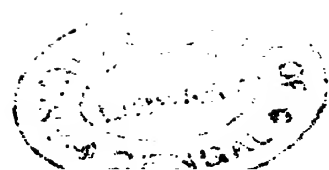
Tresus maximus, Gray.

Hab. California.

This fine species, the largest of the genus, is chiefly remarkable for the wide gaping of its posterior end, which gives to the shell a *Panopæa*-like form.

NASSA.

| | Plate. | Species. | | Plate. | Species. |
|---|---------|----------|---|--------|----------|
| abbreviata (<i>Buccinum</i>), Wood .. | XXIX. | 194 | denticulata, <i>A. Adams</i> | IX. | 55 |
| abyssicola, <i>A. Adams</i> | XXVI. | 175 | dentifera, <i>Powis</i> | XIX. | 130 |
| albescens (<i>Bucc.</i>), <i>Dunker</i> | XV. | 100 | dispar, <i>A. Adams</i> | VII. | 45 |
| albipunctata, <i>Reeve</i> | XXI. | 144 | distorta, <i>A. Adams</i> | V. | 32 |
| algida, <i>Reeve</i> | XXII. | 145 | dorsuosa, <i>A. Adams</i> | XXI. | 141 |
| ambigua (<i>Bucc.</i>), <i>Montagu</i> | XXVIII. | 187 | echinata, <i>A. Adams</i> | XX. | 131 |
| angulifera, <i>A. Adams</i> | VI. | 34 | elegans (<i>Bucc.</i>), <i>Kiener</i> | II. | 10 |
| annellifera, <i>Reeve</i> | XXV. | 168 | exilis, <i>Powis</i> | XV. | 101 |
| Antillarum (<i>Bucc.</i>), <i>Phil.</i> | XII. | 77 | fasciata (<i>Bucc.</i>), <i>Quoy</i> | VI. | 40 |
| areolaria, <i>Lamarck</i> | IV. | 25 | festiva, <i>Powis</i> | XVIII. | 117 |
| badia, <i>A. Adams</i> | XIX. | 124 | fida, <i>Reeve</i> | XIII. | 88 |
| bellula, <i>A. Adams</i> | XXVIII. | 184 | filosa, <i>Gray</i> | VI. | 35 |
| bimaculosa, <i>A. Adams</i> | X. | 61 | fissilabris, <i>A. Adams</i> | XXI. | 138 |
| Brouni (<i>Bucc.</i>), <i>Philippi</i> | XXII. | 149 | foveolata, <i>Dunker</i> | XIII. | 83 |
| caelata, <i>A. Adams</i> | XX. | 133 | fuscata, <i>A. Adams</i> | XIX. | 127 |
| callosa, <i>A. Adams</i> | XXVIII. | 185 | gaudiosa, <i>Hinds</i> | VIII. | 48 |
| callospira, <i>A. Adams</i> | X. | 66 | Gayi (<i>Bucc.</i>), <i>Kiener</i> | XIII. | 87 |
| canaliculata, <i>Lamarck</i> | III. | 18 | gemmulata, <i>Lamarck</i> | V. | 29 |
| cancellata, <i>A. Adams</i> | XXIII. | 155 | gemmulifera, <i>A. Adams</i> | XX. | 132 |
| candens, <i>Hinds</i> | VI. | 39 | geniculata, <i>A. Adams</i> | XXVI. | 171 |
| cerotina, <i>A. Adams</i> | XVI. | 107 | <i>gibba</i> , <i>Roissy</i> | I. | 6 |
| cinctella, <i>A. Adams</i> | XXVI. | 176 | <i>gibbosula</i> (<i>Bucc.</i>), <i>Linn.</i> | X. | 64 |
| cinisculus, <i>Reeve</i> | XXII. | 146 | glabrata (<i>Aciculina</i>), <i>A. Ad.</i> .. | XXIV. | 157 |
| cinnamomea, <i>A. Adams</i> | XIX. | 126 | glans (<i>Bucc.</i>), <i>Linn.</i> | I. | 5 |
| circumcincta, <i>A. Adams</i> | XI. | 71 | glauca, <i>C. B. Adams</i> | XXI. | 139 |
| clathratula, <i>A. Adams</i> | XIX. | 125 | globosa (<i>Bucc.</i>), <i>Quoy</i> | X. | 62 |
| collaria, <i>Gould</i> | XXV. | 169 | granifera (<i>Bucc.</i>), <i>Kiener</i> | XI. | 72 |
| complanata, <i>Powis</i> | XVII. | 111 | <i>Gruneri</i> (<i>Bucc.</i>), <i>Dunker</i> | XII. | 75 |
| compta, <i>A. Adams</i> | XVI. | 106 | hirta (<i>Bucc.</i>), <i>Kiener</i> | I. | 1 |
| conciuna, <i>Powis</i> | XIII. | 82 | hispidula, <i>A. Adams</i> | VI. | 37 |
| coronata, <i>Lamarck</i> | III. | 20 | horrida (<i>Bucc.</i>), <i>Dunker</i> | XI. | 69 |
| coronula, <i>A. Adams</i> | XV. | 99 | incrassata (<i>Tritonium</i>), <i>Müller</i> .. | XVII. | 114 |
| corticata, <i>A. Adams</i> | XXVIII. | 189 | <i>Isabellei</i> , <i>D'Orbigny</i> | VII. | 47 |
| costata, <i>A. Adams</i> | XXI. | 142 | Japonica (<i>Desmoulea</i>), <i>A. Ad.</i> .. | XXIX. | 192 |
| costellifera, <i>A. Adams</i> | IX. | 58 | <i>labecula</i> , <i>A. Adams</i> | XXV. | 166 |
| crassa (<i>Bucc.</i>), <i>Koch</i> | X. | 67 | labiata (<i>Aciculina</i>), <i>A. Adams</i> .. | XXIV. | 159 |
| cremata, <i>Hinds</i> | IV. | 26 | labida, <i>Reeve</i> | XXVII. | 179 |
| crenellifera, <i>A. Adams</i> | VIII. | 49 | lachrymosa, <i>Reeve</i> | VIII. | 52 |
| crenolirata, <i>A. Adams</i> | XXV. | 165 | lentiginosa, <i>A. Adams</i> | III. | 15 |
| crenulata (<i>Bucc.</i>), <i>Brug.</i> | I. | 2 | leptospira, <i>A. Adams</i> | XIII. | 84 |
| Cumingii, <i>A. Adams</i> | V. | 80 | lirella, <i>Beck</i> | XIV. | 95 |
| dealbata, <i>A. Adams</i> | XVI. | 105 | luctuosa, <i>A. Adams</i> | XVI. | 109 |
| decussata (<i>Bucc.</i>), <i>Kiener</i> | XVIII. | 121 | luteostoma (<i>Bucc.</i>), <i>Kiener</i> | X. | 63 |
| delicata, <i>A. Adams</i> | XXVII. | 180 | maculata (<i>Aciculina</i>), <i>A. Ad.</i> .. | XVI. | 103 |
| densigranata, <i>A. Adams</i> | XXVII. | 181 | Maderensis, <i>Reeve</i> | XXVII. | 182 |

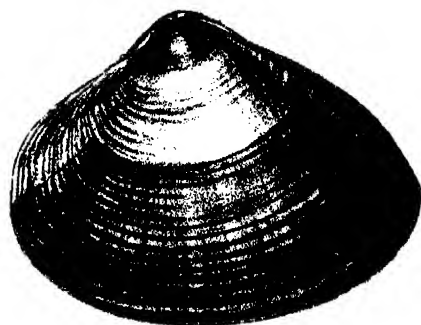


NASSA.—INDEX.

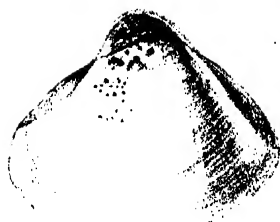
| | Plate. | Species. | | Plate. | Species. |
|--|---------|----------|---|---------|----------|
| <i>Mangeloides, Reeve</i> | XXIII. | 152 | <i>retcosa, A. Adams</i> | V. | 28 |
| <i>margaritifera (Bucc.)</i> , Dunker . . | IX. | 59 | <i>reticulata (Bucc.)</i> , Linn. | IX. | 57 |
| <i>marginulata, Lamarck</i> | VII. | 43 | <i>retusa (Bucc.)</i> , Lamarck | XXIX. | 195 |
| <i>marmorea, A. Adams</i> | I. | 7 | <i>ringens (Desmoulea)</i> , A. Adams . . | XXIX. | 190 |
| <i>Melanoides, Reeve</i> | XXII. | 150 | <i>rosacca, Reeve</i> | XXVII. | 183 |
| <i>micans, A. Adams</i> | XXI. | 140 | <i>rufula (Bucc.)</i> , Kiener | II. | 14 |
| <i>Miga (Bucc.)</i> , Brug. | XIII. | 86 | <i>rutilans, Reeve</i> | XXII. | 147 |
| <i>mitralis, A. Adams</i> | XIX. | 128 | <i>Sanctæ-Helenæ, A. Adams</i> | XXVIII. | 188 |
| <i>monile (Bucc.)</i> , Kiener | VI. | 38 | <i>scabriuscula, Poirais</i> | XXVI. | 174 |
| <i>mucronata, A. Adams</i> | II. | 8 | <i>scalaris, A. Adams</i> | IV. | 21 |
| <i>multicostata, A. Adams</i> | XX. | 136 | <i>semigranosa (Bucc.)</i> , Dunker . . . | XVII. | 116 |
| <i>muricata (Bucc.)</i> , Quoy | XI. | 73 | <i>seminodosa, A. Adams</i> | I. | 3 |
| <i>mutabilis (Bucc.)</i> , Linn. | I. | 6 | <i>semiplicata, A. Adams</i> | XII. | 78 |
| <i>myristica, Hinds</i> | XVIII. | 119 | <i>sertula, A. Adams</i> | XIV. | 89 |
| <i>nana, A. Adams</i> | XXV. | 164 | <i>Siquijorensis, A. Adams</i> | VIII. | 53 |
| <i>Neritca (Bucc.)</i> , Linn. | XXIII. | 153 | <i>sinusigera, A. Adams</i> | XVII. | 113 |
| <i>nigella, Reeve</i> | XXVI. | 173 | <i>sordida, A. Adams</i> | XV. | 96 |
| <i>niven, A. Adams</i> | XVIII. | 122 | <i>speciosa, A. Adams</i> | III. | 16 |
| <i>nodata, Hinds</i> | VII. | 41 | <i>spirata, A. Adams</i> | II. | 13 |
| <i>nodicostata, A. Adams</i> | XV. | 97 | <i>stigmatica, A. Adams</i> | VII. | 42 |
| <i>nodifera, Poirais</i> | IV. | 23 | <i>Stimpsoniana (Bucc.)</i> , C. B. Ad. . | XXI. | 143 |
| <i>Novæ-Zelandiæ, Reeve</i> | XXVIII. | 186 | <i>stolidia, A. Adams</i> | V. | 31 |
| <i>nucleolus, Philippi</i> | XXVII. | 178 | <i>striata, C. B. Adams</i> | XXVII. | 177 |
| <i>obsoleta, Say</i> | XII. | 79 | <i>Sturmii (Bucc.)</i> , Philippi | XXII. | 148 |
| <i>obtusata, A. Adams</i> | XX. | 135 | <i>sulcifera, A. Adams</i> | IV. | 24 |
| <i>olivacea (Bucc.)</i> , Brug. | III. | 19 | <i>succincta, A. Adams</i> | XII. | 80 |
| <i>orbiculata, A. Adams</i> | XXIII. | 154 | <i>suturalis, Lamarck</i> | I. | 4 |
| <i>ornata (Bucc.)</i> , Kiener | V. | 33 | <i>tegula, Reeve</i> | XV. | 98 |
| <i>pallida, Poirais</i> | IX. | 60 | <i>tenella, Reeve</i> | XXIV. | 163 |
| <i>pallidula, A. Adams</i> | XVI. | 108 | <i>Terchroides, Reeve</i> | XXIV. | 161 |
| <i>papillosa (Bucc.)</i> , Linn. | II. | 12 | <i>teretiusscula, A. Adams</i> | XVI. | 104 |
| <i>pauperata, Lamarck</i> | V. | 27 | <i>tessellata, Reeve</i> | XXV. | 167 |
| <i>pellucida (Cyclops)</i> , Risso | XXIII. | 151 | <i>Thersites (Bucc.)</i> , Brug. | X. | 65 |
| <i>picta, Dunker</i> | II. | 9 | <i>tiarula (Bucc.)</i> , Kiener | XIV. | 92 |
| <i>pinguis (Desmoulea)</i> , A. Adams . . | XXIX. | 193 | <i>Tritoniformis (Bucc.)</i> , Kiener . . | XVIII. | 120 |
| <i>planicostata, A. Adams</i> | XII. | 76 | <i>unicolorata (Bucc.)</i> , Kiener . . . | III. | 17 |
| <i>plicatella, A. Adams</i> | IX. | 56 | | | |
| <i>polygonata, Lamarck</i> | XVIII. | 123 | <i>varicosa, A. Adams</i> | | |
| <i>pouderosa, Reeve</i> | XXIX. | 196 | <i>varicosa, A. Adams</i> | | |
| <i>pulchella, A. Adams</i> | XIV. | 90 | <i>varicosa (Bucc.)</i> , Dunker | | |
| <i>pulla (Bucc.)</i> , Linn. | IV. | 28 | | | |
| <i>punctata, A. Adams</i> | VIII. | 14 | | | |
| <i>Pupinoides, Reeve</i> | XXIV. | 162 | <i>vibex, Say</i> | XII. | 119 |
| <i>pusio, A. Adams</i> | XXVI. | 172 | | | |
| <i>pyramidalis (Desmoulea)</i> , A. Ad. . | XXIX. | 191 | <i>vittata (Aciculina)</i> , A. Adams . . | XXIV. | 160 |
| <i>ravida, A. Adams</i> | XI. | 68 | <i>Wilsoni, C. B. Adams</i> | XXIV. | 158 |
| | | | <i>zonalis, A. Adams</i> | XIV. | 93 |

ERRATUM.

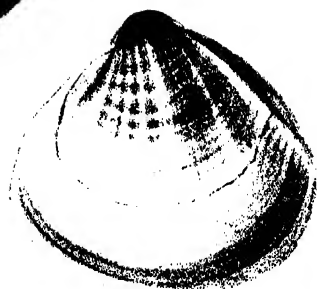
Plate XXIV. Sp. 163. For *N. delicata*, read *N. tenella*.



5.



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7.



8.

MACTRA.

PLATE II.

Species 5. (Mus. Cuming.)

MACTRA SULCATARIA. *Mact. testā ovalo-transversā, sub-aequilaterali, turgidulā, utrāque extremitate aequaliter obtusā, transversim sulcatā, ad umbones levigatā, flavā, umbonibus depressis, violaceis, albo radiatis; lunulā areāque magnis, eleganter plicatis; valvis intus albo-flavescentibus; cardine angusto, fossulā ligamenti obliquā; dentibus lateralibus compressis, brevibus.*

THE GROOVED MACTRA. Shell ovately transverse, nearly equilateral, rather swollen, equally obtuse at each extremity, transversely grooved, smooth at the umboes, yellowish, umboes depressed, violet, white-rayed; lunule and area large, elegantly plaited; valves whitish-yellow within; hinge narrow, ligamentary pit oblique; lateral teeth compressed, short.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. ----?

Chiefly distinguished by its transverse concentric grooves, which converge neatly on each side in the area and lunule.

Species 6. (Mus. Cuming.)

MACTRA CORDIFORMIS. *Mact. testā subtrigonā, tenni, centricosā, vix aequilaterali, extremitate posticā subproductā, transversim minutē striatā, umbones versus latus latus; lunulā areāque subamplis, subtiliter plicatoliratis; flavescente-albā, umbones versus ferrugineo-fusco sparsim linctā et marmoratā, intus albā.*

THE HEART-SHAPED MACTRA. Shell subtriangular, thin, ventricose, scarcely equilateral, posterior extremity rather beaked, transversely minutely striated, smooth towards the umboes; lunule and area rather large, delicately plicately ridged; yellowish-white, sparingly mottled and stained with rust-red towards the umboes, white interiorly.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. ----?

A thin ventricose subtriangular species, finely striated, almost smooth, the striae gathering into the area and lunule in fine close-set plait-like ridges. The shell is of a yellowish-white, zigzag-mottled, and stained about the umboes with light rust-red.

Species 7. (Mus. Cuming.)

MACTRA INFLATA. *Mact. testā subtrigono-ovalā, parum tumidā, vix aequilaterali, latere antico breviusculo, postico subangulato-truncato; lunulā indistinctā, areā magnā; albida, violascente linctā et radiatā, umbonibus violaceis, intus albā.*

THE INFLATED MACTRA. Shell somewhat triangularly ovate, but little swollen, scarcely equilateral, anterior side rather short, posterior rather angularly truncated; lunule indistinct, area large; whitish, stained and rayed with pale violet, umboes violet, interior white.

BROWN, Philippi, Enum. Moll. Siciliae, p. 11. pl. 3. f. 1.

Hab. Naples.

It is somewhat doubtful whether this is not a variety of the *M. stultorum*, though more solid and compressed than the typical form of that species.

Species 8. (Mus. Cuming.)

MACTRA SOLIDISSIMA. *Mact. testā transversē oblongā, crassiusculā, sordidē albā, epidermide flavescente-fusca indutā, inequilaterali, latere postico longiore, paululum hians; lunulā areāque subindistinctis; foreā cardinali peramplā, triangulari, impressione palli posticē indentatā.*

THE VERY SOLID MACTRA. Shell transversely oblong, rather thick, dirty-white, covered with a yellowish-brown epidermis, inequilateral, posterior side the longer, a little gaping; lunule and area rather indistinct; hinge-pit very large, triangular, impression of the mantle indented posteriorly.

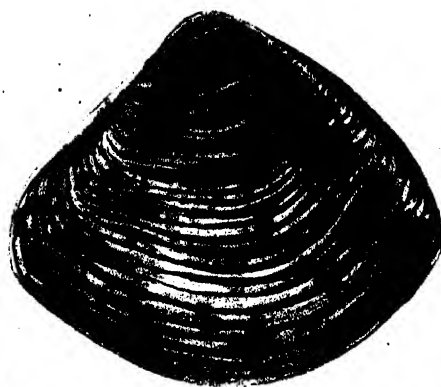
CHEMNITZ, Conch. Cab. vol. x. pl. 170. f. 1856.

Mactra gigantea, Lamarck.

Hab. United States (about sandy beaches); Gould.

Dr. Gould, of Boston, United States, describes this large species as living abundant about the sandy beaches of Massachusetts. At low water it is dug out of the sand with shovels; at higher tides, when the shell is open, the fishermen wade into the water, thrusting a pointed stick into the sand before them as they walk along. When the stick passes between the valves, the animal closes the shell upon it and is drawn up.

March, 1854.



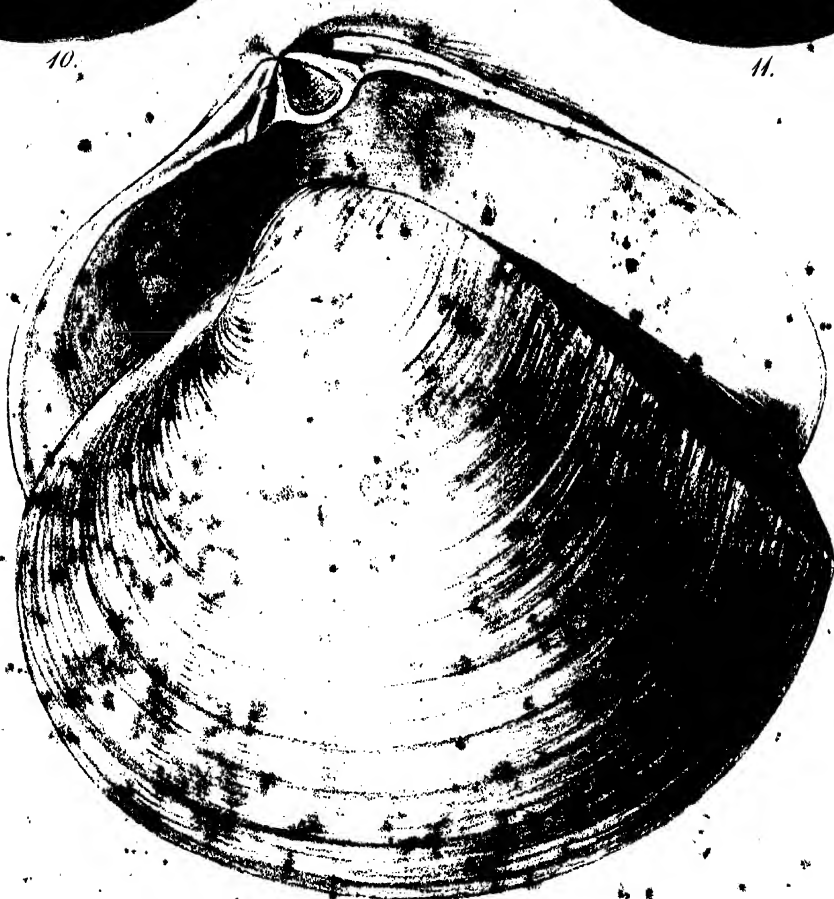
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10.



11.



12.

MACTRA.

PLATE III.

Species 9. (Mus. Cuming.)

MACTRA RUFESCENS. *Macl. testā ovato-trigoniā, inequilateralī, crassā, solidā, lateribus planā et subangulatā, transversim sulcato-plicatis, plicis irregulariter flexuoso-corrugatis; albā, rufescente plus minus tinctā, ad umbones indistinctē radiatā, latere antico attenuatō, subrostrato, postico angulato; areā lunulāque magnā, flexurā circumdatā, intus a sinu pallii brevī; dentibus cardinalibus validis.*

THE REDDISH MACTRA. Shell ovately triangular, inequilateral, thick, solid, flat and rather angled at the sides, transversely groove-plaited, plaits irregularly flexuously wrinkled; white, more or less stained with red, indistinctly rayed at the umbones, anterior side attenuated and a little beaked, posterior angled; area and lunule large, surrounded with a flexure, interior white, sinus of the mantle short; cardinal teeth strong.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vi. p. 102.
Hab. Van Diemen's Land.

A solid flexuously wrinkled shell, having very much the form of a gibbous *Crassatella*, but without the rich brown epidermis characteristic of that genus.

Species 10. (Mus. Cuming.)

MACTRA SERICEA. *Macl. testā ovato-transversā, tenui, compressā, medio lunuliscutā, subequilateralī, latere antico rotundato, postico subattenuatō, paululum flexuoso, levigatā, versus marginē tenuistriatā, albā, epidermide fuscescente sericeā indutā; areā lunulāque rē contractis, subtiliter plicato-striatis, uncinis, ad apicem violaceis; cardine angustō, dentibus lateralibus elongatis, fossulā profundā, sinu pallii oblique ascendente.*

THE SILKY MACTRA. Shell ovately transverse, thin, compressed, rather swollen in the middle, nearly equilateral, anterior side rounded, posterior rather attenuated and a little gaping, smooth, finely striated towards the margin, white, covered with a light brown silky epidermis; area and lunule scarcely convex, finely plicately striated, umbones small, violet-tinted at the tips; hinge narrow, lateral teeth elongated, pit deep, sinus of the mantle obliquely ascending.

DESHAYES, *Pro. Zool. Soc.* 1854.

Hab.

A thin compressed transverse species, rather swollen towards the umbones, covered with a light brown silky epidermis. Umbones violet at the tips.

Species 11. (Mus. Cuming.)

MACTRA EPIDERMIA. *Macl. testā ovato-transversā, tenui, compressā, albā, epidermide fuscescente sericeā indutā, subequilateralī, latere antico rotundato, postico sublongiore, paululum flexuoso-carinatō; lunulā areāque angustis, elongatis.*

THE CLOTHED MACTRA. Shell ovately transverse, thin, compressed, whitish, covered with a light brown silky epidermis, nearly equilateral, anterior side rounded, posterior rather longer and slightly flexuously keeled, lunule and area narrow, elongated.

DESHAYES, *Pro. Zool. Soc.* 1854.

Hab. Faro, Portugal.

A thin compressed species, slightly flexuously keeled down the posterior side, covered with a light brown silky epidermis.

Species 12. (Mus. Cuming.)

MACTRA STRIATELLA. *Macl. testā ovato-cordatā, ventricosa, tenuicula, candidā, epidermide tenuissimā indutā, inequilateralī, latere antico rotundato; postico subangulato-producto, hinc, sublaterē irregulariter concentricis striatā, umbonibus approximatis, corrugato-plicatis; cardine breviusculo, foveā subcirculari.*

THE FINELY STRIATED MACTRA. Shell ovately heart-shaped, ventricose, rather thin, white, covered with a very slight epidermis, inequilateral, anterior side rounded, posterior subangularly produced and gaping, finely irregularly concentrically striated, umbones approximated, corrugately plaited; hinge rather short, pit subcircular.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vi. p. 98.

Enc. Méth. pl. 355. f. 1.

Spisula striatella, Gray.

Macl. albina, Deshayes.

Hab. —?

A fine large ventricular epidermis, the umbones.

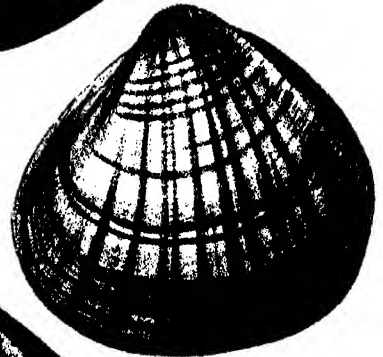
covered with a very thin cuticle, finely wrinkled-plaited about



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16.

MACTRA.

PLATE IV.

Species 13. (Mus. Cuming.)

MACTRA GLAUCA. *Mact. testā ovato-transversā, tenuicula, tumidiusculā, subaequilaterali, sub epidermide flavidā vel squalidē fuscescente, pallidē glaucā, radiis helvis numerosis ornatā; lunulā areāque indistinctis, umbonibus parvis, tumidiusculis, approximatis, interdum pallidē violaceis; dentibus lateralibus elongatis, lamelliformibus, in valvā dextrā duplicibus; sinu pallii latissimo, brevi, semicirculari.*

THE GLAUCOUS MACTRA. Shell ovately transverse, rather thin, somewhat swollen, nearly equilateral, smooth, pale glaucous, ornamented with numerous light red rays beneath a yellowish or dirty-brown epidermis; lunule and area indistinct, umboes small, rather swollen, approximated, sometimes violet-tinged; lateral teeth elongated, lamelliform, double in the right valve; sinus of the mantle very broad, short, semicircular.

BORN. Mus. Cæs. Vindobonensis, p. 51. pl. 3. f. 11, 12.

Mactra hekeacea, Chemnitz.

Mactra Neapolitana, Poli.

Hab. European Seas.

The epidermis of this well-known European species is of a close fibrous silky character.

Species 14. (Mus. Cuming.)

MACTRA AEQUILATERA. *Mact. testā triangulari, æquilaterali, tumidā, lævigatā, anticē striatā, albo-griseā, cuticulā florescente indutā, anticē posticēque angulatā, latere postico plano, lato, angulo acuto circumscripto; lunulā permarginā, depressā, cum aream, lævigatā; valvis crassis, intus nitidis, albo-griseis; cardine angusto, crasso, brevi; dente cardinali parvo; dentibus lateralibus crassis, brevibus, antico longiore; sinu pallii lato, profundo, semielliptico.*

THE EQUILATERAL MACTRA. Shell triangular, equilateral, swollen, smooth, striated anteriorly, whitish-grey, covered with a yellowish cuticle, angled anteriorly and posteriorly, posterior side flat, broad, forming a sharp angle; lunule very large, depressed, and, with the area, smooth; valves thick, shining within, whitish-grey; hinge-narrow, thick, short; cardinal tooth small; lateral teeth thick, short, anterior the longer; sinus of the mantle broad, deep, semielliptic.

DESLAYES, Pro. Zool. Soc. 1854.

Hab. New Zealand; Earl.

A solid triangular shell, *Donax*-like on the posterior

side, and bearing some resemblance in general aspect to *M. Spengleri*.

Species 15. (Mus. Cuming.)

MACTRA STULTORUM. *Mact. testā ovato-subtriangulā, æquilaterali, lævigatā, interdum hic illic obsoletē sulcatā, violaceo-cinereā, rufescente tinctā et radiatā, umbonibus brevibus, approximatis; areā gibbosiusculā, angulo obtusissimo circumscriptā; intus violaceā.*

THE FOOLS' MACTRA. Shell ovately subtriangular, equilateral, smooth, sometimes here and there obsoletely grooved, violet-ash, tinged and rayed with pale red, umboes short, approximated; area rather gibbous, surrounded by a very obtuse angle; violet in the interior.

Cardium stultorum, Linnaeus, Syst. Nat. (10th edit.) p. 681.

Mactra stultorum, Linnaeus (Syst. Nat. 12th edit.).

Mactra rotundata, Gmelin.

Trigonella radiata, Da Costa.

Tellina radiata, Pennant.

Mactra lactea, Potiez and Michaud.

Mactra solida, Payraudeau.

Hab. European Seas.

This commonest of all species ranges throughout the seas of Europe, from Norway to the Mediterranean.

Species 16. (Mus. Cuming.)

MACTRA EXOLETA. *Mact. testā ovato-transversā, obliquē cordatā, tenui, ventricosā, lavi vel subtilissimē striatā, epidermide tenui fulcā cornuā indutā, latere antico attenuato, compressiusculo, cuneiformi, postico lato, obliquē angulato, ad angulum tenuicarinato; lunulā inconspicuā, in medio cristatā; areā peramplā.*

THE WORN MACTRA. Shell ovately transverse, obliquely cordate, thin, ventricose, smooth or finely striated, covered with a thin fulvous horny epidermis, anterior side attenuated, rather compressed, wedge-shaped, posterior broad, obliquely angled, slightly keeled at the angle; lunule inconspicuous, crested in the middle; area very large.

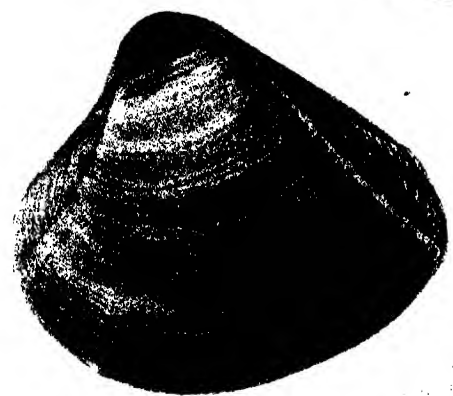
GRAY, Mag. Nat. Hist. 1837, p. 372.

Hab. Cape Horn and West Columbia.

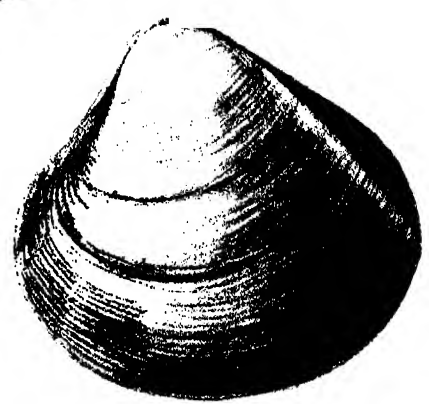
A very light ventricose species, peculiarly cordately impressed on the anterior side, with the margins of the valves rising through the centre of the lunule into an elevated crest. The epidermis is of a thin horny deciduous character.



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MACTRA

PLATE V.

Species 17. (Mus. Cuming.)

MACTRA DISCORS. *Macl. testâ rotundato-ovata, subtri-gonâ, crassiusculâ, æquilaterali, regulariter convexâ, lorigulâ, griseo-albâ, epidermide nigricante-fuscâ ver-sus marginem indutâ, latere postico subplanulato, an-gulo obtuso subtiliter carinulato circumscripto, umbo-nibus parvis, confertim approximatis; lunulâ areâque plicato-striatis; sinu pallii brevissimo, lato, semicir-culari.*

THE HARSH MACTRA. Shell rotundately ovate, some-what triangular, rather thick, equilateral, regularly convex, smooth, greyish-white, covered towards the margin with a blackish-brown epidermis, posterior side rather flattened, surrounded with a slightly keeled obtuse angle, umboes small, closely approxi-mated; lunule and area plicately striated; sinus of the mantle very short, broad, semicircular.

GRAY, Faun. of New Zealand, p. 251. Mag. Nat. Hist.
. 1837, p. 371.

Hab. New Zealand.

Of rather solid rounded proportions, stone-white, here and there faintly rust-tinged, covered near the margin with a dirty black-brown epidermis.

Species 18. (Mus. Cuming.)

MACTRA MERETRICIFORMIS. *Macl. testâ ovato-trigonâ, tenuiculâ, ventricosissimâ, cordiformi, concentricè tenui-striatâ, striæ in areâ lunulâque plicato-elevatis, sordidè albâ, epidermide fuscrescente indutâ, umbonibus atro-violaceis, latere antico rotundato, postico subelongato-rostrato, intus lilacinâ; cardine angusto, in medio prominente; dentibus lateralibus lamellosis; sinu pallii brevi, lato, rix inflexo.*

THE MERETRIX-SHAPED MACTRA. Shell ovately trian-gular, rather thin, very ventricose, heart-shaped, con-centrically finely striated, striæ plicately raised in the area and lunule, dirty-white, covered with a brown-ish epidermis, umboes blackish-violet, anterior side rounded, posterior somewhat elongately beaked, in-terior lilac; hinge narrow, prominent in the middle; lateral teeth lamellous; sinus of the mantle short, broad, scarcely inflected.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Port Essington; Jukes.

The name given to this species is intended to denote its general external resemblance with the *Cytherea meretrix*.

Species 19. (Mus. Cuming.)

MACTRA ORESA. *Macl. testâ ovato-trigonâ, subcordiformi, crassiusculâ, ventricosâ, lorigulâ, albâ, epidermide fus-crescente indutâ, latere antico obtuso, subangulato-pro-ductâ; areâ lunulâque plicato-striatis, umbonibus ap-proxinatis; sinu pallii brevi, lato, semielliptico; den-tibus lateralibus compressis.*

THE STOUT MACTRA. Shell ovately triangular, some-what heart-shaped, rather thick, ventricose, smooth, whitish, covered with a light brown epidermis, an-terior side obtuse, posterior subangularly produced; area and lunule plicately striated, umboes approxi-mated; sinus of the mantle short, broad, semi-ellip-tic; lateral teeth compressed.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Torres Straits, North Australia; Jukes.

Somewhat resembling the preceding species in form, though perfectly distinct in detail, more solid, ivory-white about the umboes, and less beaked posteriorly.

Species 20. (Mus. Cuming.)

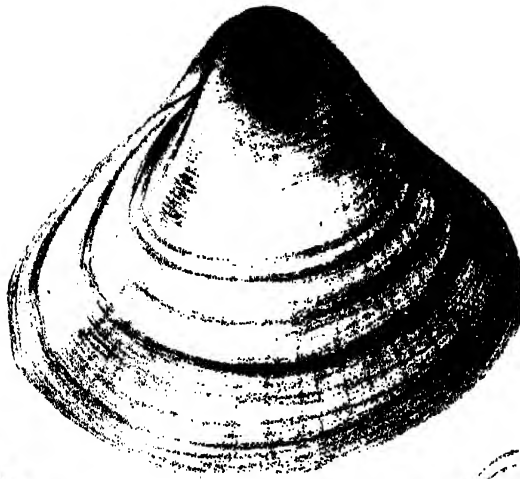
MACTRA VELATA. *Macl. testâ ovato-oblongâ, subtri-gonâ, crassiusculâ, opaco-albâ, ferrugineo-tinctâ, epidermide atro-fuscâ indutâ, inæquilaterali, utrinque hian-te, latere postico subcarinulato; areâ lunulâque subangustis, umbonibus confertim approximatis; dentibus laterali-bus brevibus, forâ ligamenti amplâ.*

THE CLAD MACTRA. Shell ovately oblong, subtriangular, rather thick, opaque-white, rust-tinged, covered with a black-brown epidermis, inequilateral, gaping at each end, posterior side slightly keeled; area and lunule rather narrow, umboes closely approximated; lateral teeth short, ligamentary pit large.

PHILIPPI, Zeitschrift für Malac. 1848, p. 153. Abbild.
vol. iii. pl. 3. f. 5.

Hab. Panama (on the reef); C. B. Adams.

A rather solid rust-tinged opaque-white shell, covered with a rather thick dirty black-brown fibrous epidermis.



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MACTRA.

PLATE VI.

Species 21. (Mus. Cuming.)

MACTRA TUMIDA. *Mact. testā ovato-trigonā, ventricosissimā, tumidā, tenuiculā, irregulariter transversim striatā, versus umbones levigatā, extremitatibus angulatā, anticē suboblusā, albo-flavescente, ad umbones violaceis; umbonibus cordatis, subapproximatis; sinu pallii brevi, lato, obliquē ascendente.*

THE SWOLLEN MACTRA. Shell ovately triangular, extremely ventricose, swollen, rather thin, irregularly transversely striated, smooth towards the umboes, angled at the extremities, anteriorly a little obtuse, whitish-yellow, violet at the umboes; umboes heart-shaped, rather approximated; sinus of the mantle short, broad, obliquely ascending.

CHEMNITZ, *Conch. Cab.* vol. vi. p. 218. pl. 21. f. 210-212.

Macetra turgida, Gmelin.

Hab. Island of St. Thomas, West Indies; Cuming.

A plain smooth largely swollen species, of a whitish-yellow cast, tinged at the umboes with violet.

Species 22. (Mus. Cuming.)

MACTRA ANTIQUATA. *Mact. testā trigonā, inflatā, solidiusculā, æquilaterali, extremitatibus subattenuatā, transversim dense tenuissimē striatā, pallidē spadiceā, subtiliter albiradiatā, ad umbones intensē violaceā; lunulā arcuāque subgrandibus, eleganter plicato-striatis, intus violascente; sinu pallii lato, rotundato.*

THE ANCIENT MACTRA. Shell triangular, inflated, rather solid, equilateral, subattenuated at the extremities, transversely densely very finely striated, light fawn-colour, finely white-rayed, deep violet at the umboes; lunule and area rather large, elegantly plicately striated, interior violet; sinus of the mantle broad, rounded.

SPENGLER, *Skriv. Naturh. Selak.* vol. v. part 2. p. 102.

Macetra violacea australis, Chemnitz.

Macetra Chemnitzii, Gray.

Hab. Bay of Manilla; Cuming.

A more compressed and solid species than the preceding, faintly white-rayed, with very deep-stained violet umboes.

Species 23. (Mus. Cuming.)

MACTRA LARGILLIERTI. *Mact. testā ovato-trigonā, subæquilaterali, tumidā, posticē hiantē, sub epidermide nittente, olivaceo-flavā, radiis angustis violaceis pictā; arcū lunulāque planiusculis, eleganter plicato-striatis; ligamento externo valdē conspicuo, laminā ab interno diviso.*

LARGILLIERT'S MACTRA. Shell ovately triangular, nearly equilateral, swollen, posteriorly gaping, olive-yellow, painted with narrow violet rays beneath a shining epidermis; area and lunule rather flat, elegantly plicately striated; outer ligament very conspicuous, divided by an internal lamina.

PHILIPPI, *Zeitschrift für Malac.* 1848, p. 162. *Abbild.* und *Besch.* *Conch.* vol. ii. p. 135. pl. 3. f. 1.

Hab. Gaboon, West Africa.

Of a peculiar swollen transverse form, covered with a shining yellow epidermis.

Species 24. (Mus. Cuming.)

MACTRA CUMINGII. *Mact. testā ovato-trigonā, tenui, ventricosissimā, cordiformi, subæquilaterali, transversim irregulariter obsolete striatā, cuticulā tenui flavescente fibrosā pellucidā indutā, albā, incarnato-roseo distanter radiatā, latere antico rotundato, postico peculiariter compresso-rostrato; umbonibus tumidis, cordatis, subapproximatis; lunulā latiusculā, arcū angustā, elongatā; sinu pallii lato, brevissimo.*

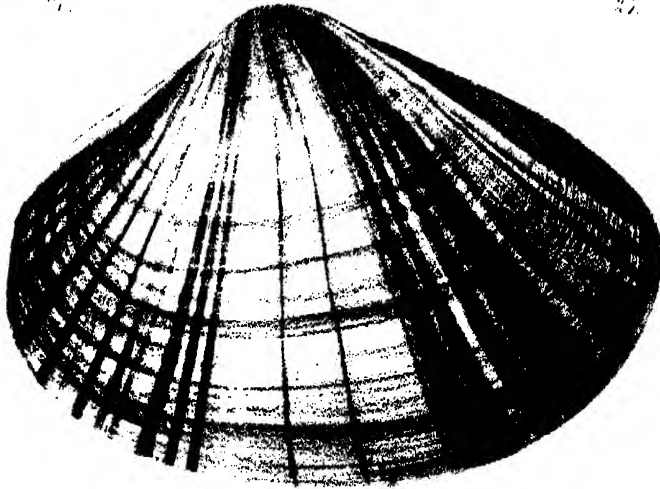
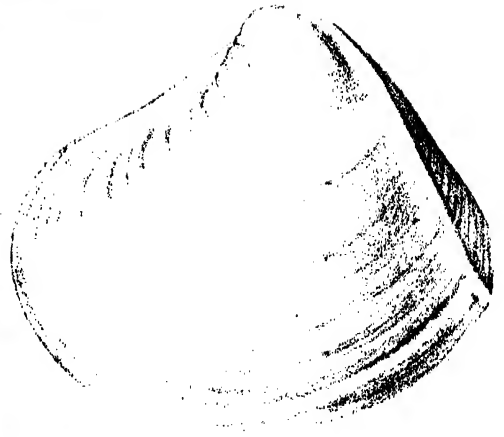
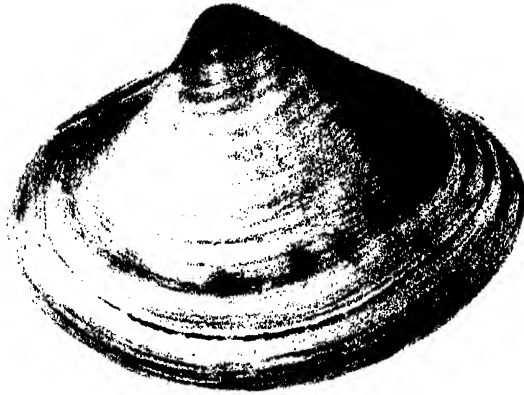
CUMING'S MACTRA. Shell ovately triangular, thin, very ventricose, heart-shaped, nearly equilateral, transversely irregularly obsoletely striated, covered with a thin yellowish fibrous pellucid cuticle, white, distantly rayed with flesh-rose, anterior side rounded, posterior peculiarly compressly beaked; umboes swollen, cordate, rather approximated; lunule rather broad, area narrow, elongated; sinus of the mantle broad, very short.

DESHAYES, *Pro. Zool. Soc.* 1854.

Hab. Moluccas.

An exquisitely delicate and characteristic species, light and ventricose, compressly beaked on the posterior side, ivory-white, marked with faint distant flesh-rose rays, and covered with a peculiar linear silky fibrous epidermis.





MACTRA.

PLATE VII.

Species 25. (Mus. Cuming.)

MACTRA SUBROSTRATA. *Mact. testā oblongo-transversā, tumidā, inaequilaterali, striis transversis lineisque radiantibus subtilibus impressis decussatā, fulvo-griseā; umbonibus violaceis; latere antico rotundato, postico subrostrato, hiantē; lunulā planiusculā, areā lanceolatā, excavatā.*

THE SLIGHTLY-BEAKED MACTRA. Shell oblong-transverse, swollen, inequilateral, decussated with transverse striae and fine depressed radiating lines, fulvous grey; umboes violet; anterior side rounded, posterior slightly beaked, gaping; lunule rather flat, area lanceolate, excavated.

DENHAYES, *Proc. Zool. Soc.* 1854.

Hab. Moluccas.

Very closely allied to *M. violacea*, but more oblong and swollen, and slightly beaked at the posterior extremity.

Species 26. (Mus. Cuming.)

MACTRA Plicataria. *Mact. testā transversē subtrigonā, compressā, inaequilaterali, concentricē irregulariter subflexuosē plicato-costatā, obliquē minutissimē striatā, pellucido-albā, diaphanā, epidermide tenui fuscā versus marginem indutā; latere antico subproducto, rotundato, postico angulato, plicato-carinato; lunulā lanceolato-ovatā, areā peramplā, ambabus levibus; umbonibus parvis.*

THE PLAITED MACTRA. Shell transversely subtriangular, compressed, inequilateral, concentrically plicately ribbed, obliquely very minutely striated, transparent white, diaphanous, covered towards the margin with a thin brown epidermis; anterior side rather produced, rounded, posterior angulated, plicately keeled; lunule lanceolately ovate, area very large, both smooth; umboes small.

LINNEUS, *Syst. Nat.* (12th edit.) p. 1125.

Hab. Island of Sumatra.

This fine species is strongly plait-ribbed throughout, the plaits and interstices being very minutely obliquely striated across.

Species 27. (Mus. Cuming.)

MACTRA LEVIS. *Mact. testā ovato-triangulari, inaequi-*

laterali, candidissimā, nitente, irregulariter transversim minutissimē striatā, ad umbones plicatā, anticē posticēque latē plicatā, in medio lanigatā; latere antico subproducto, rotundato, postico truncato, plicato-angulato; lunulā lanceolato-ovatā, areā peramplā, excavatā, ambabus levibus; sinu pallii brevissimā, apice obtuso, obliquē triangulari.

THE SMOOTH MACTRA. Shell ovately triangular, inequilateral, very white, shining, irregularly transversely very minutely striated, plaited at the umboes, broadly plaited anteriorly and posteriorly, smooth in the middle; anterior side rather produced, rounded, posterior truncated, plicately angled; lunule lanceolately ovate, area very large, excavated, both smooth; sinus of the mantle very short, obtuse at the top, obliquely triangular.

CHEMNITZ, *Conch. Cab.* vol. vi. p. 214. pl. 21. f. 205 and 206.

Mactra striatula, pars, Gmelin.

Mactra subplicata, Lamarck.

Mactra Spengleri, Born (not of Linnæus).

Hab. Island of Samar, Philippines; Cuming.

Distinguished by a faint row of ripple-like plaits descending on each side the umboes.

Species 28. (Mus. Cuming.)

MACTRA HIANS. *Mact. testā oblongo-ovatā, subtrigonā, tenuiculā, inaequilaterali, transversim densē minutē striatā, livido-albā, fulvo-rufō radiatā, ad umbones violaceo tinclā; latere antico subtruncato, postico longiore, rotundato, hiantē; lunulā lanceolato-ovatā, areā angustā, leviter rugoso-angulatā.*

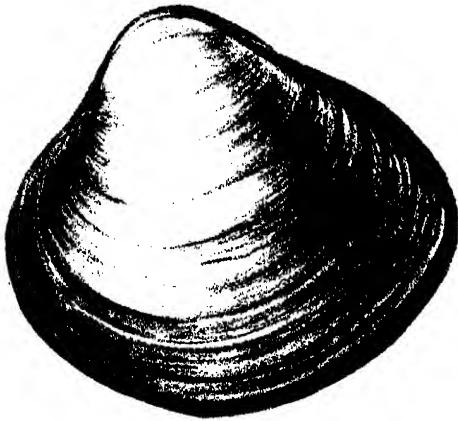
THE GAPIING MACTRA. Shell oblong-ovate, subtriangular, rather thin, inequilateral, transversely densely minutely striated, livid white, rayed with fulvous-red, violet-tinged at the umboes; anterior side subtruncated, posterior longer, rounded, gaping; lunule lanceolately ovate, area narrow, slightly rugosely angled.

PHILIPPI, *Abbild. und Besch. Conch. Mactra*, pl. 2. f. 1.

Hab. Island of Mindanao, Philippines; Cuming.

A fine ruddy-rayed species, of rather thinnish substance, gaping at the posterior end.





MACTRA.

PLATE VIII.

Species 29. (Mus. Cuming.)

MACTRA ALATA. *Mact. testā ovato-trigonā, obliquā, convexā, inaequilaterali, transversim irregulariter minutè striatā, candidissimā, pellucidā, epidermide tenui stramineā versus marginem indutā; latere antico subattenuato, postico latiore, angulato, ad angulum carinā foliaceā lamellari alato; umbonibus acutè angulatis; lunulā indistinctā, medio valdè elevatā, areā peramplā, plano-excavatā.*

THE WINGED MACTRA. Shell ovately triangular, oblique, convex, inequilateral, transversely irregularly minutely striated, very white, transparent, covered towards the margin with a light straw-coloured epidermis, anterior side subattenuated, posterior broader, angled, winged at the angle with a lamellar foliaceous keel; umboes sharply angled; lunule indistinct, much raised in the middle, area very large, flatly excavated.

SPENGLER, Skriv. Naturh. Selsk. vol. v. part 2. p. 99.

Mactra carinata, Lamarck.

Hub. West Columbia; Cuming.

Well distinguished by the conspicuous curly foliaceous keel, that rises on the angle in each valve bordering the posterior area.

Species 30. (Mus. Cuming.)

MACTRA OVATA. *Mact. testā ovatā, turgidā, hiantē, subaequilaterali, rudè transversim striatā, squalidè fulvā, ochraceo tinctā, latere antico obtuso, postico subattenuato; umbonibus tumidis, oppositis, confertis; lunulā areāque indistinctis, intus medio pallidè aurantiā.*

THE OVATE MACTRA. Shell ovate, swollen, gaping, nearly equilateral, rudely transversely striated, dirty-fulvous, ochre-stained, anterior side obtuse, posterior subattenuated; umboes swollen, opposite, close; lunule and area indistinct, interior pale orange in the middle.

Spisula ovata, Gray, Fauna of New Zealand, p. 251.

Hub. New Zealand.

A dull swollen shell, irregularly rudely striated, tinged with orange in the interior.

Species 31. (Mus. Cuming.)

MACTRA EXIMIA. *Mact. testā ovato-transversā, æquilaterali, extremitatibus ambabus æqualiter obtusis, trans-*

versim minutissimè striatā, purpurascente-cinereā, incarnato-radialā, epidermide fibrosā fulvā versus marginem indutā; lunulā areāque amplis, subindistinctis, in medio elevatis, eleganter plicato-tiratis; umbonibus tumidiusculis, approximatis; sinu pallii brevissimo, lato, regulariter arcuato.

THE PRETTY MACTRA. Shell ovately transverse, equilateral, both extremities equally obtuse, transversely very minutely striated, purple-ash, flesh-rayed, covered towards the margins with a fibrous fulvous epidermis; lunule and area large, rather indistinct, raised in the middle, elegantly plicately ridged; umboes rather swollen, approximated; sinus of the mantle very short, broad, regularly arched.

DESHAYES, Pro. Zool. Soc. 1854.

Hub. Moreton Bay, Australia; Strange.

A very characteristic species, minutely striated in the middle, whilst on the area and lunule it is strongly elegantly plicately ridged.

Species 32. (Mus. Cuming.)

MACTRA EDULIS. *Mact. testā ovato-trigonā, crassā, solidā, æquilaterali, utrinque subangulatā, sordidè albā, ferrugineo-rufa interdum hic illic tinctā, plus minus erosā, epidermide olivaceā partim indutā; lunulā areāque indistinctis, medio subelevatis; umbonibus tumidiusculis, oppositis; sinu pallii trigono, obtuso, brevi, horizontali.*

THE EATABLE MACTRA. Shell ovately triangular, thick, solid, equilateral, slightly angled on both sides, dirty-white, sometimes tinged here and there with rust-red, more or less eroded, partially covered with an olive epidermis; lunule and area indistinct, slightly raised in the middle; umboes rather swollen, opposite; sinus of the mantle triangular, obtuse, short, horizontal.

KING, Zoological Journal, vol. v. p. 335.

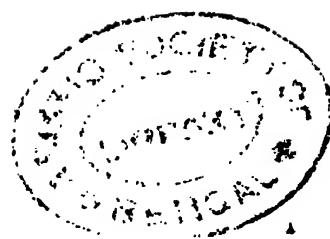
Mulinia edulis, Gray.

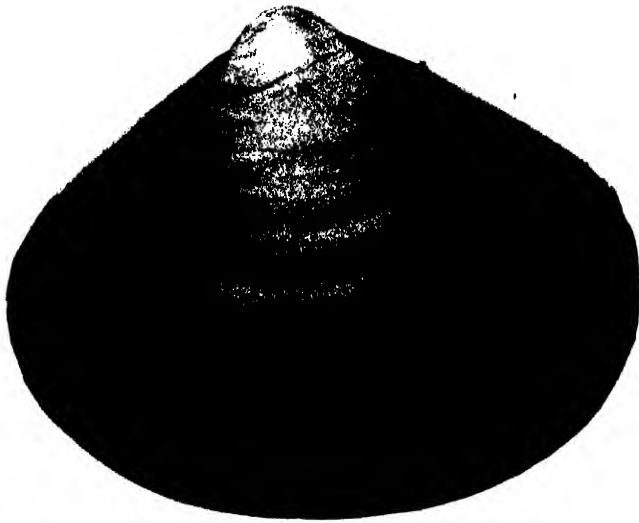
Mulinia bicolor, Gray.

Mulinia typica, Gray.

Hub. Patagonia and Straits of Magellan.

A dingy suberoded solid shell, extremely variable in form according to its variety of growth.

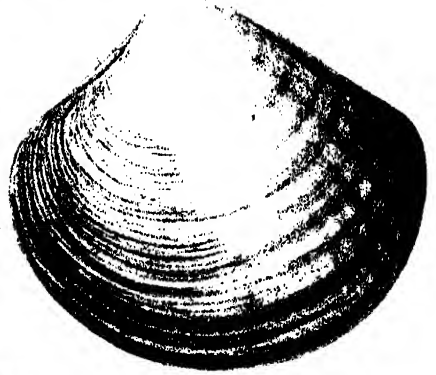




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MACTRA.

PLATE IX.

Species 33. (Mus. Cuming.)

MACTRA SAYI. *Mact. testā transversim ovatā, latè subtrigonā, compressiusculā, subæquilateralī, solidiusculā, utroque latere æqualiter declivi et obtuso, infernè regulariter arcuato, sub epidermide flavescente cretaceo-albā, levigatā, substriatā; umbonibus minimis, aculis, subobliquis; areā lunulāque indistinctis.*

SAY'S MACTRA. Shell transversely ovate, broadly subtriangular, rather compressed, nearly equilateral, rather solid, both sides equally slanting and obtuse, regularly arched at the lower part, chalk-white beneath a yellowish epidermis, smooth, finely substriated; umboes very small, acute, a little oblique; area and lunule indistinct.

Spisula Sayi, Gray, Ann. and Mag. Nat. Hist. 1837, p. 373.

Hab. Florida.

A stone-white compressed shell, covered with a strong yellowish-olive epidermis.

Species 34. (Mus. Cuming.)

MACTRA ANGULATA. *Mact. testā transversim ovatā, turgidā, trigonā, acutè angulatā, inequilateralī, tenuistriatā, calcareo-albā, nilente, epidermide tenui stramineā indutā, latere antico rotundato, postico angulato-rostrato; lunulā indistinctā, areā peramplā, medio elevatā; umbonibus tumidis, acutè angulatis.*

THE ANGLED MACTRA. Shell transversely ovate, turgid, triangular, sharply angled, inequilateral, finely striated, chalk-white, shining, covered with a thin straw-coloured epidermis, anterior side rounded, posterior angularly beaked; lunule indistinct, area very large, raised in the middle; umboes swollen, sharply angled.

GRAY, MS. in Brit. Mus.

Hab. Gulf of California.

Allied to *M. Donaciformis*, though uniformly of larger size. It is chiefly characterized by the large broad concavely angled growth of the posterior area.

Species 35. (Mus. Cuming.)

MACTRA OLORINA. *Mact. testā transversim ovatā, trigonā, tumidiusculā, inæquilateralī, levigatā, nilente, anticè densè transversim striatā, incarnato-albā, epidermide stramineā prope marginem indutā, latere antico rotundato, postico rostrato; umbonibus subcompressis; lunulā oblongo-ovatā, striatā, areā elongatā.*

THE SWAN-LIKE MACTRA. Shell transversely ovate, triangular, rather swollen, inequilateral, smooth, shining, anteriorly closely transversely ridged, flesh-white, covered near the margin with a straw-coloured epidermis, anterior side rounded, posterior beaked; umboes subcompressed; lunule oblong-ovate, striated, area elongated.

PHILIPPI, Abbild. und Besch. Conch. vol. ii. p. 72. pl. 2. f. 2.

Hab. Red Sea.

A delicate flesh-white polished shell, densely ridged on the anterior side only, and peculiarly beaked at the posterior extremity.

Species 36. (Mus. Cuming.)

MACTRA OVALIS. *Mact. testā transversim ovatā, compressiusculā, subæquilateralī, transversim rudè striatā, sordidè albā, epidermide fulvo-olivaceā crassiusculā indutā; umbonibus compressis, approximatis; lunulā areāque indistinctis; sinu pallii profundo.*

THE OVAL MACTRA. Shell transversely ovate, rather compressed, nearly equilateral, transversely rudely striated, dirty-white, covered with a rather thick fulvous-olive epidermis; umboes compressed, approximated; lunule and area indistinct; sinus of the mantle deep.

SAY, Journ. Acad. Nat. Sci. Philadelphia, vol. ii. p. 309.

Spisula similis, Gray.

Macra ponderosa, Philippi.

Hab. Massachusetts, United States.

More truly ovate than *M. Sayi*, and of rougher growth, with the lunule and area much less distinct. It attains a much larger size than is represented in the accompanying Plate.



11.



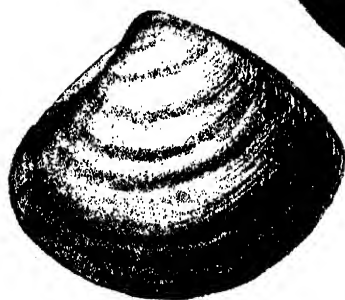
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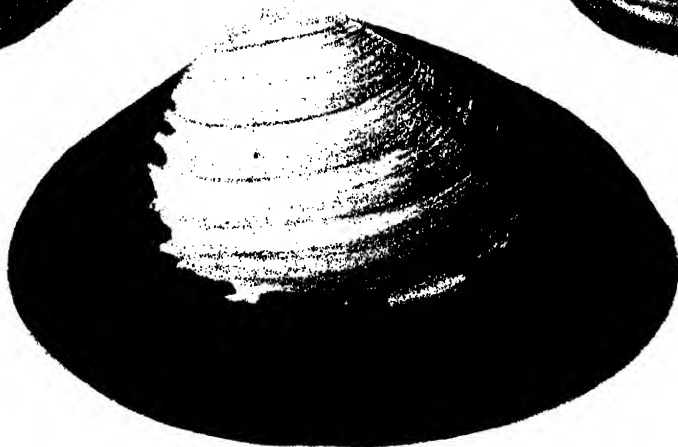
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16.



17.

MACTRA.

PLATE X.

Species 37. (Mus. Cuming.)

MACTRA CYPRINUS. *Mact. testā ovato-transversā, æquilaterali, tenui, fragili, albā, diaphanā, transversim striatā, ad umbones gibbā, anticè declivi et obtusā, posticè dilatatā, subtruncatā, valdè hiantē, lineā prominente obliquè decurrentē, latere antico plano, postico prominente, aperto.*

THE CARP MACTRA. Shell ovately transverse, equilateral, thin, fragile, white, diaphanous, transversely striated, gibbous at the umbones, anteriorly slanting and obtuse, posteriorly dilated, subtruncated, very much gaping, with a prominent line running down obliquely, anterior side flat, posterior prominent and open.

GRAY, Wood, Index Test. pl. 1. f. 1.

Lutaria cyprina, Gray.

Cyprina cyprina, Gray.

Hab. —?

An interesting semitransparent fragile species, having somewhat the aspect of *Anulina*.

Species 38. (Mus. Cuming.)

MACTRA CARINULATA. *Mact. testā trigono-transversā, tumidā, æquilaterali, utrinque acutè angulatā, tenuissimè striatā, albā, epidermide tenui fuleā indutā; lunulā areāque indistinctis, grandibus, medio subelevatis; umbonibus angulatis; sinu pallii angusto, profundo, obliquè ascendente.*

THE FINELY-KEELED MACTRA. Shell triangularly transverse, swollen, equilateral, sharply angled on both sides, very finely striated, white, covered with a thin fulvous epidermis; lunule and area indistinct, large, slightly raised in the middle; umbones angled; sinus of the mantle narrow, deep, obliquely ascending.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Gulf of California.

A shell of comparatively small size and of light growth, partaking of the typical characters of *M. Donaciformis*, and from the same locality.

Species 39. (Mus. Cuming.)

MACTRA POLITA. *Mact. testā trigono-ovalā, subæquilaterali, solidā, cinereo-fuscescente, incarnato tinctā,*

promiscuè fasciatā, densè striatā, latere antico rotundato, postico subflexuoso-angulato; umbonibus minimis, violaceis; lunulā indistinctā, areā magnā, medio subelevatā.

THE POLISHED MACTRA. Shell triangularly ovate, nearly equilateral, solid, light ash-brown, flesh-stained, promiscuously banded, densely striated, anterior side rounded, posterior slightly flexuously angled; umbones very small, violet; lunule indistinct, area large, slightly raised in the middle.

CHEMNITZ, Conch. Cab. vol. vi. p. 222. pl. 22. f. 216, 217.

Mactra glabrata, Schroeter.

Mactra australis, Lamarck.

Hab. Swan River.

Thick-set with shining striae, and of a light ash-colour, promiscuously banded, with the umbones violet-tipped.

Species 40. (Mus. Brit.)

MACTRA SPENGLERI. *Mact. testā triangulari, transversā, æquilaterali, cuneiformi, transversim obsolete striatā, albo-lutescente, sub epidermide squalidè fuscā; umbonibus minimis, distantissimis, fossulā ligamenti triangulari, exterius apertā, separatis; lunulā magnā, convexiusculā; latere postico plano, lato, angustā, acutā, circumscriptā; valvis solidiusculis, intus albis; dentibus lateralibus brevibus, cardine approximatis; sinu pallii profundo, obtuso, horizontali.*

SPENGLER'S MACTRA. Shell triangular, transverse, equilateral, wedge-shaped, transversely obsoletely striated, whitish-yellow, beneath a dirty light brown epidermis; umbones very small, very distant, separated a ligamentary pit which is triangular, and outwardly open; lunule large, rather convex, posterior side flat, broad, narrow, sharp, circumscribed; valves rather solid, white within; lateral teeth short, approximating to the hinge; sinus of the mantle deep, obtuse, horizontal.

LINNÆUS, Syst. Nat. (12th edit.) p. 1125.

Schizodesma Spengleri, Gray.

Hab. Cape of Good Hope.

Remarkably distinguished from all other species by its sharp wedge-like form, and by its outwardly seen excavated crescent-like ligament pit.

Species 41. (Mus. Cuming.)

MACTRA MITIS. *Mact. testā trigono-ovatā, tumidā, tenuiculā, subæquilaterali, densè tennistriatā, incarnato-spaldiceā, lateribus rotundatis, postico supernè declivi; lunulā areāque subangustis, eleganter striatis; umbonibus parvis, approximatis.*

THE RIPE MACTRA. Shell triangularly ovate, swollen, rather thin, nearly equilateral, very closely finely striated, flesh-tinged, fawn-colour, sides rounded, posterior slanting at the upper part; lunule and area rather narrow, elegantly striated; umboes small, approximated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Mouth of the Gambiā, West Africa.

A very simple character, and of a light flesh-tinged fawn-colour.

Species 42. (Mus. Cuming.)

MACTRA TRUNCATA. *Mact. testā trigonā, crassā, solidā, æquilaterali, sordidè albā, zonis transversis fulvis subdistantibus interdum notatā, latere antico rotundato, postico subangulato et truncato; umbonibus minimis, angulatis, approximatis; lunulā indistinctā, areā subamplā, ambabus medio subelevatis.*

THE TRUNCATED MACTRA. Shell triangular, thick, solid, equilateral, dead-white, sometimes marked with transverse distant fulvous zones, anterior side rounded, posterior slightly angled and truncated; umboes very small, angled, approximated; lunule indistinct, area rather large, both slightly raised in the middle.

MONTAGU, Test. Brit. sup. p. 34.

Pectunculus crassiusculus, Lister.

Trigonella zonaria, Da Costa.

Venus rugosa, Gmelin.

Maetra subtruncata, Donovan.

Maetra crassatella, Lamarck.

Spisula truncata, Gray.

Hab. Britain.

A simple subtruncated triangularly ovate shell, of solid growth, of a dead white cast, more or less covered with a thin brownish epidermis.

Species 43. (Mus. Brit.)

MACTRA ELONGATA. *Mact. testā transversim elongatā, trigonā, crassā, solidā, inæquilaterali, sordidè albā, epidermide fuscā indutā, transversim rudè striatā, striis ad extremitates plicato-rugosis, latere antico brevi, truncato, postico duplo longiore, attenuato; umbonibus compressis, confertis; lunulā excavatā, subindistinctā, areā longā, angustā.*

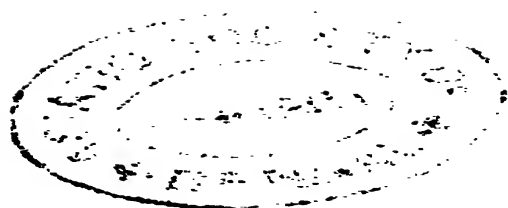
THE ELONGATED MACTRA. Shell transversely elongated, triangular, thick, solid, inequilateral, dead-white, covered with a brown epidermis, transversely rudely striated, striæ plicately rugose at the extremities, anterior side short and truncated, posterior twice as long, attenuated; umboes compressed, close-set; lunule excavated, rather indistinct, area long and narrow.

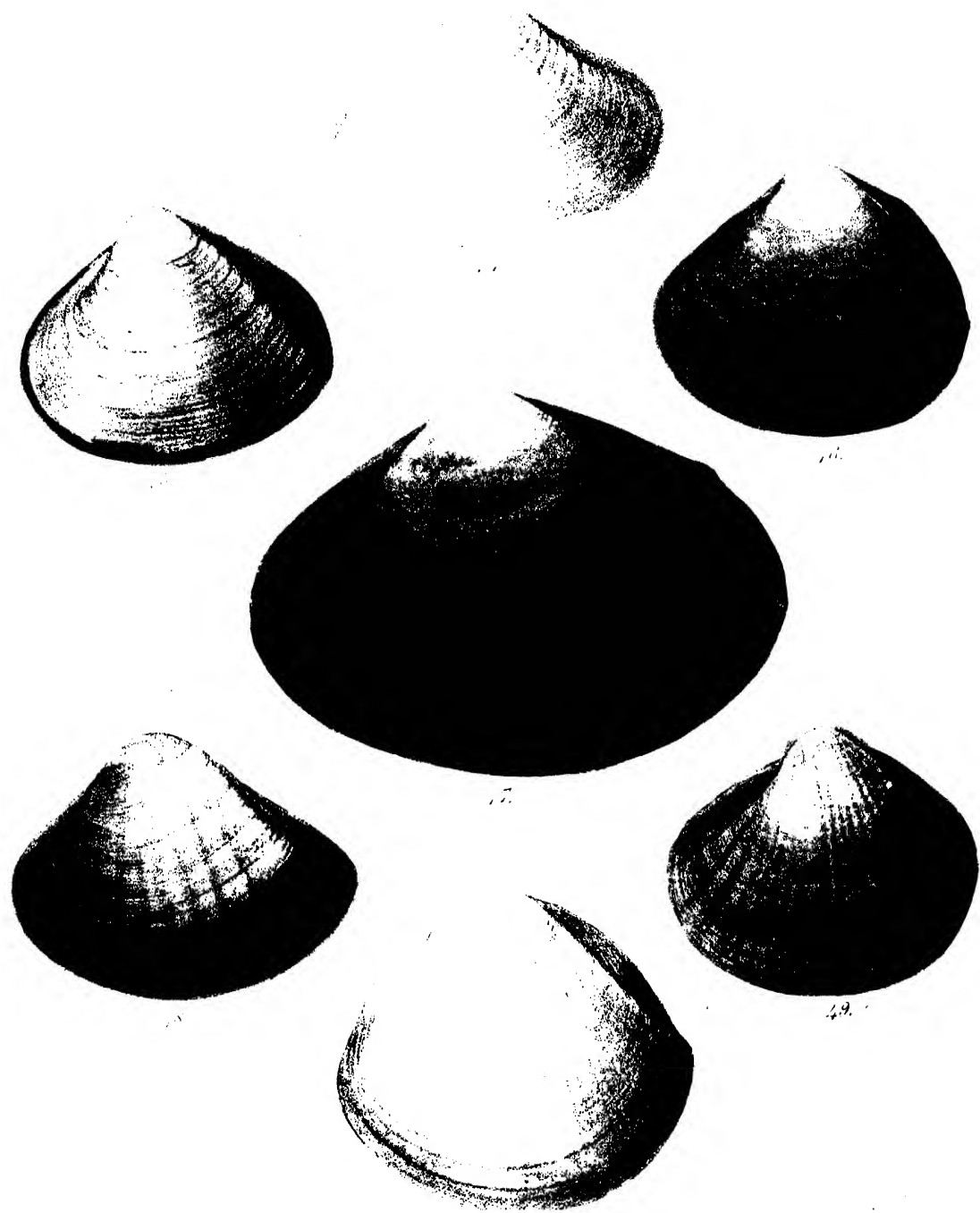
QUOY and GAIMARD, Voy. de l'Astrolabe, pl. 111. f. 5-8.

Spisula elongata, Gray.

Hab. New Zealand.

A shell of solid growth, and of unusually oblong transverse form.





MACTRA.

PLATE XI.

Species 44. (Mus. Cuming.)

MACTRA VITREA. *Mact. testā trigonā, turgidulā, tennis-simā, vitreo-albā, inaequilaterali, utrinque hiantē, latere antico brevi, subcompressā, lirā obsoletā descendente, postico producto, rotundato, eleganter corrugato-plicato; umbonibus angulatis, nitidē plicato-striatis; lunulā viz nullā, medio elevata, areā subamplā, cordiformi, plano-excavatā.*

THE GLASSY MACTRA. Shell triangular, rather swollen, very thin, diaphanous, glassy-white, inequilateral, gaping at both ends, anterior side short, rather compressed, with an obsolete ridge descending, posterior produced, rounded, elegantly wrinkle-plaited; umbones angled, neatly plicately striated; lunule scarcely any, raised in the middle, area rather large, heart-shaped, flatly excavated.

GRAY, Ann. and Mag. Nat. Hist. 1837, p. 372.

Hab. Moluccas.

A delicate pellucid white shell, elegantly wrinkle-plaited down the posterior side.

Fig. 45. (Mus. Cuming.)

The shell here figured represents the *Maetra typicus*, Gray, which proves to be a variety of *M. edulis*.

Species 46. (Mus. Cuming.)

MACTRA NITIDA. *Mact. testā ovato-trigonā, æquilaterali, turgidulā, anticē obtusā, posticē subangulatā, latere postico depresso, angulo acutiusculō circumscripto, candidissimā, nitentē, sub epidermide flavicante, posticē squalidiore; umbonibus parvis; lunulā magnā, eleganter sulcatā, ovali, fossulā ligamenti exterius apertā; valvis intus albis; sinu pallii brevi, trigono.*

THE SHINING MACTRA. Shell ovately triangular, equilateral, rather swollen, obtuse anteriorly, slightly angled posteriorly, posterior side depressed, circumscribed into a rather sharp angle, very white, shining, beneath a yellowish epidermis, duller on the posterior side; umbones small; lunule large, elegantly grooved, oval, ligamentary pit outwardly open; valves white within; sinus of the mantle short, triangular.

Maetra nitida, Schrocter, Einl. Conch. vol. iii. pl. 8. f. 2.

Maetra straminea, Lamareck.

Schizodesma nitida, Gray.

Hab. Senegal.

Of a shining white substance, covered with a thin shining horny epidermis, and peculiarly sharply angled down the posterior side.

Species 47. (Mus. Cuming.)

MACTRA FRAGILIS. *Mact. testā ovato-oblongā, subæquilaterali, compressā, transversim tenuē et irregulariter striatā, albā, sub epidermide fibrosā griseo-flavescente, in latere postico nigricante, latere antico obtuso, paululum attenuato, postico subtruncato, hiantē, bilirato, liris subdistantibus; umbonibus compressis, approximatis; lunulā areāque elongatis, angustis.*

THE FRAGILE MACTRA. Shell ovately oblong, nearly equilateral, compressed, transversely finely and irregularly striated, white, beneath a greyish-yellow fibrous epidermis, blackish on the posterior side, anterior side obtuse, a little attenuated, posterior subtruncated, gaping, two-ridged, ridges rather distant; umbones compressed, approximated; lunule and area elongated, narrow.

CHEMNITZ, Conch. Cab. vol. vi. p. 236. pl. 24. f. 235.

Maetra Brasiliana, Lamareck.

Maetra oblonga, Say.

Spisula fragilis, Gray.

Hab. Honduras; Dyson.

Of rather slight form, characterized by a space down the posterior side between two ridges, in which the epidermis is darker than on the rest of the shell.

Species 48. (Mus. Cuming.)

MACTRA SEMISULCATA. *Mact. testā transversim ovatā, tumidā, solidiusculā, inaequilaterali, albidā, nitentē, epidermide tenui stramineā partim indutā, latere antico rotundato, transversim sulcato, sulcis medium versus evanidis, postico conspicuē rostrato; lunulā areāque latiusculis, plicato-striatis; umbonibus tumidis, politis, approximatis.*

THE HALF-GROOVED MACTRA. Shell transversely ovate, swollen, rather solid, inequilateral, whitish, shining, partially covered with a thin straw-coloured epider-

mis, anterior side rounded, transversely grooved, grooves fading in the middle, posterior conspicuously beaked; lunule and area rather broad, plicately striated; umboes swollen, polished, close.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Australia.

An interesting half-grooved anteriorly beaked shell, having very much the form of *Crassatella*.

Species 49. (Mus. Cuming.)

MACTRA ADANSONI. *Mact. testā ovato-oblongā, transversā, turgidulā, subaequilaterali, albo-flavicante, nitente, pallidē violaceo angustē multiradiatā, latere antico regulariter striato, medio et latere postico levigatis; lunulā areāque oratis, parvisculis, eleganter striatis; umbonibus subangulatis, violaceis.*

ADANSON'S MACTRA. Shell ovately oblong, transverse, rather swollen, nearly equilateral, whitish-yellow, shining, narrowly many-rayed with pale violet, anterior side regularly striated, middle and posterior side smooth; lunule and area ovate, rather small, elegantly striated; umboes rather angular, violet-tipped.

PHILIPPI, Zeitschrift für Malac. 1848, p. 152.

Le Lisor, Adanson.

Mactra lilacea? Lamarck.

Hab. Senegal.

Approximating in some measure to *M. stultorum*, but more transverse, and more regularly violet-rayed.

Species 50. (Mus. Cuming.)

MACTRA CORALLINA. *Mact. testā trigono-suborbiculari, subaequilaterali, tenui, tumidiusculā, eburneā, zonulis nonnullis transversalibus luteis aut rufescentibus notatā, latere antico leviter concavo-compresso; lunulā indistinctā, postico declivi, obtusē angulato; areā per amplā convexā; umbonibus angulatis, confertis.*

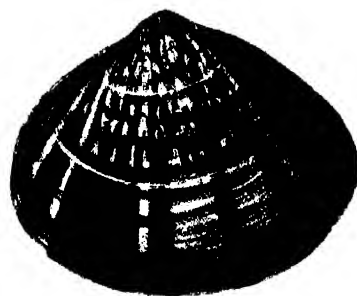
THE CORAL MACTRA. Shell triangularly suborbicular, nearly equilateral, thin, rather swollen, ivory-white, marked with a few yellowish transverse bands, anterior side slightly concavely compressed, with the lunule indistinct, posterior side slanting, obtusely angled; area very large, convex; umboes angular, close.

LINNAEUS, Syst. Nat. (12th edit.) p. 1125.

Mactra lactea, Chemnitz.

Hab. Venice, Sicily.

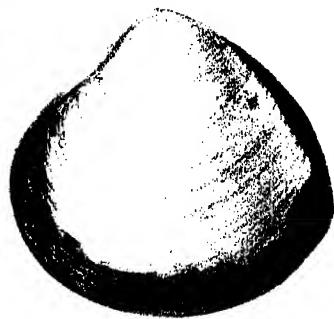
A triangularly rounded shining white species, concavely compressed on one side and convexly angled on the other.



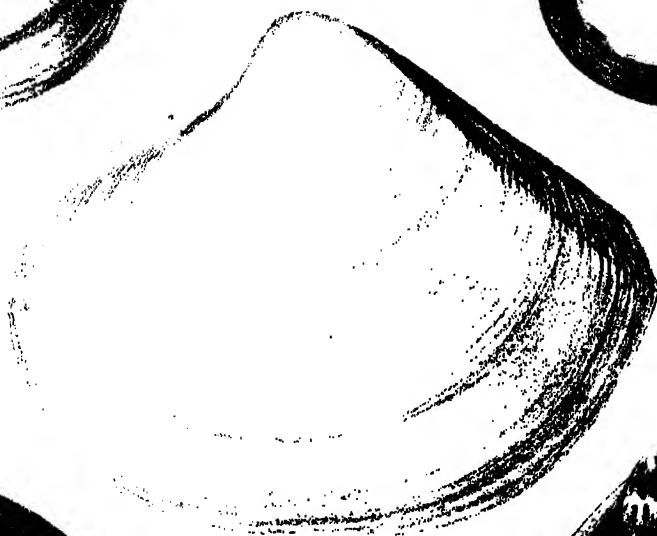
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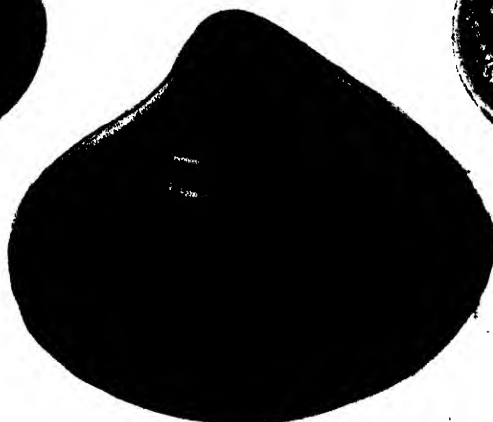
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57.

MACTRA.

PLATE XII.

Species 51. (Mus. Cuming.)

MACTRA ACHATINA. *Macl. testâ ovato-oblongâ, ellipticâ, compressâ, subæquilaterali, pallidè violaceâ, ad umbones purpurascens, maculis radiisque interruptis luteis pictâ; areâ lunulâque indistinctis.*

THE AGATE MACTRA. Shell ovately oblong, elliptical, compressed, nearly equilateral, pale violet, purple at the umbones, painted with milk-white spots and interrupted rays; area and lunule indistinct.

CHEMNITZ, Conch. Cab. vol. ii. p. 218. f. 1957.

Macra maculosa, Lamarck.

Macra adspersa, Dunker.

Macra maculata, Hanley.

Hab. Philippine Islands.

One of the most richly-coloured species of the genus, being profusely mottled and rayed throughout with violet and flesh-rose.

Species 52. (Mus. Cuming.)

MACTRA FASCIATA. *Macl. testâ ovato-trigonâ, inæquilaterali, tumidâ, lævigatâ, opaco-albâ, zonis violaceis distinctibus notatâ; umbonibus rufescente-violaceis; latere antico obtuso, leviter concavo-impresso, postico obtusè angulato; lunulâ indistinctâ, areâ subamplâ.*

THE BANDED MACTRA. Shell ovately triangular, inæquilateral, swollen, smooth, opake-white, marked with distant violet zones; umbones reddish-violet; anterior side obtuse, slightly concavely impressed, posterior obtusely angled; lunule indistinct, area rather large.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 101.

Hab. — ?

A species of very simple aspect, but well distinguished by the characters above noted.

Species 53. (Mus. Cuming.)

MACTRA PURA. *Macl. testâ ovato-trigonâ, depressiusculâ, crassâ, solidâ, æquilaterali, medio gibbâ, transversim inæqualiter obsolete striatâ, candidissimâ, sub epidermide tenui flavescens, latere antico obtuso, postico subangulato; umbonibus brevibus, depressis; lunulâ subindistinctâ, plicato-striatâ, areâ concavâ.*

THE PURE MACTRA. Shell ovately triangular, rather depressed, thick, solid, equilateral, rather gibbous in

the middle, transversely unequally obsolete striated, very white, beneath a thin yellowish epidermis, anterior side obtuse, posterior slightly angulated; umbones short, depressed; lunule rather indistinct, plicately striated, area convex.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Australia.

A solid ivory-white shell, partially covered with a straw-coloured fibrous epidermis.

Species 54. (Mus. Cuming.)

MACTRA COMPLANATA. *Macl. testâ transversim trigonâ, depressâ, æquilaterali, securiformi, lævigatâ, albâ, utroque latere æqualiter obtusâ, margine inferiore acuto, regulariter arcuato; lunulâ magnâ, elongato-lanceolatâ, sulco impresso circumdatâ, in medio prominente, areâ elongatâ, ovato-lanceolatâ, impressâ, planâ, angulo duplici circumscriptâ; umbonibus purvis, recurvis, uncinatis; valvis tenuibus, intus candidissimis; laminâ cardinali latâ, tenui; dentibus lateralibus brevibus, lamellosis, triangularibus, abruptè truncatis; sinu pallii brevi, semiellipticâ, descendente.*

THE SMOOTH MACTRA. Shell transversely triangular, depressed, equilateral, hatchet-shaped, smooth, white, equally obtuse on each side, lower margin sharp, regularly arched; lunule large, elongately lanceolate, surrounded with an impressed groove, prominent in middle, area elongated, ovately lanceolate, impressed, flat, circumscribed by a double angle; umbones small, recurved, hooked; valves thin, very white within; hinge lamina broad, thin; lateral teeth short, lamellose, triangular, abruptly truncated; sinus of the mantle short, semielliptic, descending.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Indian Ocean.

A singularly broad depressed species, with somewhat of a *Lucina* aspect.

Species 55. (Mus. Cuming.)

MACTRA SEMISTRIATA. *Macl. testâ transversim ovatâ, tumidâ, gibbosâ, subæquilaterali, lateribus rotundatis, postico paulo longiore, livido-albâ, nitente, ad umbones purpurascens, epidermine tenui partim indutâ, anticè*

sulcatâ, posticè lævigatâ; lunulâ areâque latiusculis, plicato-striatis.

THE HALF-STRIATED MACTRA. Shell transversely ovate, swollen, gibbous, nearly equilateral, sides rounded, the posterior rather the longer, livid white, shining, purplish at the umboes, partially covered with a thin straw-coloured epidermis, anteriorly grooved, striated, posteriorly smooth; lunule and area rather broad, plicately striated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. ——— ?

Of rather subglobose form, groove-striated over the anterior half of the shell.

Species 56. (Mus. Cuming.)

MACTRA MACULATA. *Macl. testâ trigono-ovatâ, tenuiculâ, compressâ, inequilateralî, transversim irregulariter tenuistriatâ, albidâ, ferrugineo-fuscescente marmoratâ, posticè castaneo-tinctâ, latere antico brevi, rotundato, postico declivi, attenuato-angulato; lunulâ subindistinctâ, areâ oblongâ, punctulatâ; umbonibus parvis, approximatis.*

THE SPOTTED MACTRA. Shell triangularly ovate, rather thin, compressed, inequilateral, transversely finely irregularly striated, whitish, mottled with light rust-brown, posteriorly chestnut-tinged; anterior side

short, rounded, posterior slanting, attenuately angled; lunule rather indistinct, area oblong, dotted; umboes small, close.

CHEMNITZ, Conch. vol. vi. pl. 41. f. 208, 209.

Mactra squalida, Lamarck.

Mactra setosa, Quoy.

Hab. Philippine Islands; Cuming.

Of rather compressed form, produced on the posterior side into a subattenuated angle.

Species 57. (Mus. Cuming.)

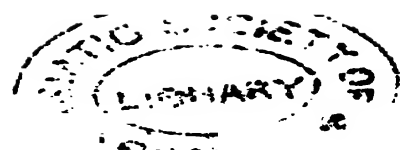
MACTRA VIOLACEA. *Macl. testâ ovato-trigonâ, æquilatrali, tenui, fragili, posticè paululum hiantè, undique intensè violaceâ, transversim densè tenuissimè striatâ, epidermide tenui versus marginem; lunulâ areâque lanceolato-ovalis; umbonibus approximatis.*

THE VIOLET MACTRA. Shell ovately triangular, equilateral, thin, fragile, a little gaping at the posterior end, everywhere deep violet, transversely densely very finely striated, with a slight epidermis towards the margin; lunule and area lanceolately ovate; umboes close.

CHEMNITZ, Conch. vol. vi. p. 220. pl. 22. f. 213, 214.

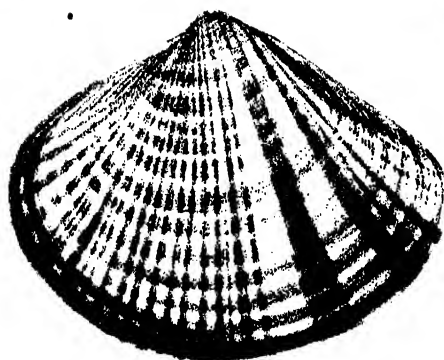
Hab. Malacca.

A shell of light structure, always distinguished by its uniform deep violet colouring within and without.

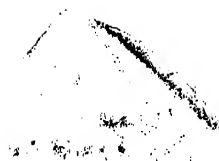




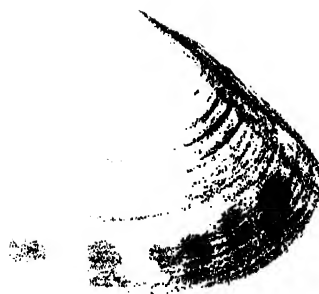
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MACTRA:

PLATE XIII.

Species 58. (Mus. Cuming.)

MACTRA ORNATA. *Mact. testā ovato-transversā, compressiusculā, tenniculā, equilaterali, levigatā, substriatā, anticē obtusā, posticē declivi et obliquē truncatā, ad umbones purpurascēte-roseā, in medio roseo obscurē radiatā, maculis albis marmoratā; umbonibus parvis, levigatis; lunulā ovatā, albescente, striatā; valvis intus purpurascēte-roseo tinctis; sinu pallii lato, semicirculari.*

THE ORNATE MACTRA. Shell ovately transverse, rather compressed, rather thin, equilateral, smooth, finely striated, anteriorly obtuse, posteriorly slanting and obliquely truncated, purple-rose at the umboes, obscurely rayed with rose in the middle, and mottled with white spots; umboes small, smooth; lunule ovate, whitish, striated; valves stained within with purple-rose; sinus of the mantle broad, semicircular.

GRAY, ANN. AND MAG. NAT. HIST. 1837, p. 371.

HAB. China Seas.

Richly stained and rayed with clear purple-rose, promiscuously mottled with white.

Species 59. (Mus. Cuming.)

MACTRA DISSIMILIS. *Mact. testā transversā, ovato-trigoniā, inaequilaterali, turgidulā, nitidā, albo-griseā, transversim cinereo-zonātā, intus purpureo-violaceā, latere antico paulo breviorē, obtuso, supernē recto, declivi, latere postico supernē convexiusculo, extremitate obtuso; umbonibus brevibus, acutis, posticē obtusē angulatis; lunulā areāque distinctis, eleganter sulcatis; valvis regulariter transversim tenuē sulcatis, sulcis versus umbones evanescentibus.*

THE DISSIMILAR MACTRA. Shell transverse, ovately triangular, inequilateral, rather swollen, shining, whitish-grey, transversely ash-zoned, interior purple-violet; anterior side rather the shorter, obtuse, straight and slanting at the upper part, posterior side rather convex at the upper part, obtuse at the extremity; umboes short, sharp, posteriorly obtusely angled; lunule and area distinct, elegantly grooved; valves regularly transversely finely grooved, grooves fading away towards the umboes.

DESHAYES, PRO. ZOOL. SOC. 1854.

HAB. Australia; Jukes.

A rather solid transversely grooved shell, of a violet-ash hue, presenting somewhat of a *Donax*-like aspect.

Species 60. (Mus. Cuming.)

MACTRA PULCHRA. *Mact. testā ovato-trigoniā, inaequilaterali, tumidiusculā, solidā, anticē breviorē, rotundatā, posticē attenuatā, flavescente-cinereā, obscurē fusco-radiatā, anticē transversim regulariter sulcatā; umbonibus tumidis, obliquis, levigatis, violaceo-tinctis, areā lunulāque ovalis, fusco-violascentibus, eleganter sulcatis, supernē albis; sinu pallii angusto, obtuso, profundo; valvis intus rufo-violaceis.*

THE BEAUTIFUL MACTRA. Shell ovately triangular, inequilateral, rather swollen, solid, anteriorly shorter, rounded, posteriorly attenuated, yellowish-ash, obscurely brown-rayed, transversely regularly grooved on the anterior side; umboes swollen, oblique, smooth, violet-tinged; area and lunule ovate, brown-violet, elegantly grooved, whitish at the upper part; sinus of the mantle narrow, obtuse, deep; valves reddish-violet within.

GRAY, ANN. AND MAG. NAT. HIST. 1837, p. 372.

HAB. Red Sea.

A shining reddish-ash species, grooved on the anterior side only, not distinguished by any particular beauty.

Species 61. (Mus. Cuming.)

MACTRA INCARNATA. *Mact. testā ovato-transversā, sub-trigoniā, tumidiusculā, inaequilaterali, posticē penitulum rostratā, tennistriatā, nitidā, albidā, incarnato-roseo eleganter radiatā; umbonibus parvis, approximatis; lunulā areāque sublanceolatis, prominentē sulcatis.*

THE FLESH-TINTED MACTRA. Shell ovately transverse, subtriangular, rather swollen, inequilateral, posteriorly a little beaked, finely striated, shining, whitish, elegantly rayed with flesh-rose; umboes small, approximated; lunule and area sublanceolate, prominently grooved.

DESHAYES, PRO. ZOOL. SOC. 1854.

HAB. Swan River; Bacon.

A characteristic subrostrate transversely ovate shell, prettily rayed throughout with flesh-rose.

Species 62. (Mus. Cuming.)

MACTRA DONACIFORMIS. *Mact. testâ ovato-trigonâ, inequaliterali, turgidâ, semicordatâ; umbonibus acutis, oppositis, distantibus, transversim tenuissimè striatâ, sub epidermide fulvâ albâ, anticè obtusâ, posticè latè planâ et angulatâ, extremitate acuminatâ.*

THE DONAX-SHAPED MACTRA. Shell ovately triangular, inequilateral, swollen, semicordate; umboes sharp, opposite, distant, transversely very finely striated, white, beneath a fulvous epidermis, anteriorly obtuse, posteriorly broadly flat and angled, acuminated at the extremity.

Mulinia Donaciformis, Gray, Ann. and Mag. Nat. Hist. 1837, p. 376. Beechey's Voyage, Moll. p. 154. pl. 44. f. 13.

Hab. New Zealand.

A very characteristic species, resembling particularly the form of the *Donax*-shaped species of *Arca*.

Species 63. (Mus. Cuming.)

MACTRA VIRGO. *Mact. testâ ovato-trigonâ, subæquilateralî, crassâ, solidâ, depressiusculâ, irregulariter transversim crebriusculâ, intus extusque candidissimâ, nitente, utroque latere æqualiter declivi, anticè obtusâ, posticè acuminatâ, subflexuosâ; umbonibus minimis, acutis, approximatis; lunulâ arcuâque lævigatis; sinu pallii brevî, lato, obtuso, obliquo.*

THE VIRGIN MACTRA. Shell ovately triangular, nearly equilateral, thick, solid, rather depressed, irregularly

transversely closely striated, very white within and without, shining, both sides equally slanting, anteriorly obtuse, posteriorly acuminated, subflexuous; umboes very small, sharp, approximated; lunule and area smooth; sinus of the mantle short, broad, obtuse, oblique.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Swan River.

An ivory-white solid shell, of a depressly triangular form, rather flexuously acuminated on the posterior side.

Species 64. (Mus. Cuming.)

MACTRA DYSONI. *Mact. testâ transversim oblongâ, sub-trigonâ, compressâ, subæquilateralî, posticè leviter acuminatâ, sub epidermide flavescente tenui calcareo-albâ, irregulariter transversim striatâ; umbonibus subacutè angulatis; lunulâ arcuâque subangulatis.*

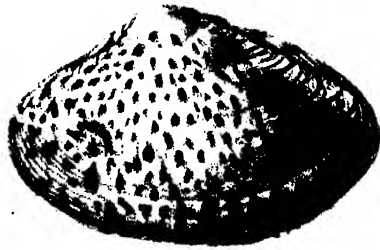
DYSON'S MACTRA. Shell transversely oblong, subtriangular, compressed, nearly equilateral, posteriorly slightly acuminated, chalk-white, beneath a thin yellowish epidermis, irregularly transversely striated; umboes rather sharply angled; lunule and slightly angled.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China.

Of a peculiarly delicate opaque chalk-white, beneath a very slight yellowish epidermis, compressed and angled towards the umboes.





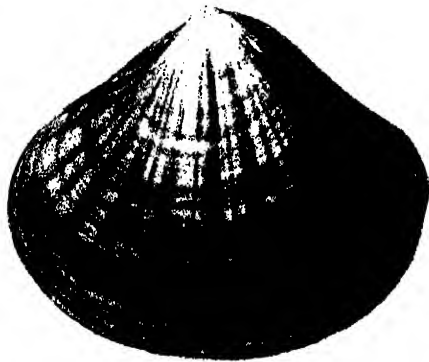
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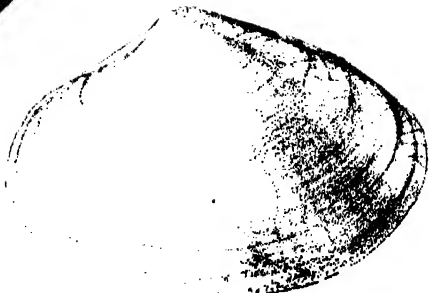
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70



MACTRA.

PLATE XIV.

Species 65. (Mus. Cuming.)

MACTRA ASPERSA. *Mact. testā elongato-transversā, ellipticā, compressā, inaequilaterali, latere postico antico duplo longiore, transversim irregulariter tenuisulcatā et striatā, albā, maculis epidermidis nigro-fuscae peculiariter notatā; umbonibus parvis, approximatis.*

THE SPINKLED MACTRA. Shell elongately transverse, elliptic, compressed, inequilateral, posterior side twice as long as the anterior, transversely irregularly finely grooved and striated, white, peculiarly marked with spots of black-brown epidermis; umboes small, approximated.

SOWERBY, Tankerville Catalogue, Appendix, p. 2.

Spisula tenera, Gray.

Hab. Philippine Islands; Cuming.

The characteristic dark spots of this species reside only in the epidermis.

Species 66. (Mus. Cuming.)

MACTRA OVALINA. *Mact. testā ovato-transversā, subaequilaterali, compressā, albā, hyalinā, tenuissimè transversim striatā, utrinque obtusā; umbonibus parvis, levigatis, approximatis; areā lanceolatā, depressione ~~longa~~ ^{rinatā} sulflexuosa utrinque notatā, lunulā angustā, depressiusculā; sinu pallii subelliptico, in medio latiore.*

THE OVALIN MACTRA. Shell ovately transverse, nearly equilateral, compressed, white, hyaline, very finely transversely striated, obtuse at both ends; umboes small, smooth, approximated; area lanceolate, with a bicarinate subflexuous depression on each side, lunule narrow, rather depressed; sinus of the mantle subelliptic, broader in the middle.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vi. p. 104.

Hab. West Columbia; Cuming.

A compressed subtransparent white shell, with a characteristic two-keeled flexuous depression down each side of the area.

Species 67. (Mus. Cuming.)

MACTRA DEPRESSA. *Mact. testā ovato-transversā, subtriangulā, inaequilaterali, depressā, transversim irregulariter tenuistriatā, albā, sub epidermide tenui stramineā, latere antico supernè concaviusculo, postico convexiusculo;*

lunulā areāque sublanceolatis; cardine lato, solidiusculo, dentibus lateralibus brevibus; sinu pallii lato, obliquè arcuato.

THE DEPRESSED MACTRA. Shell ovately transverse, subtriangular, inequilateral, depressed, transversely irregularly finely striated, white, beneath a light straw-coloured epidermis, anterior side rather concave at the upper part, posterior rather convex; lunule and area sublanceolate; hinge broad, rather solid; lateral teeth short; sinus of the mantle broad and obliquely arched.

SPENGLER, *Skriv. Naturch. Selsk.* vol. v. p. 118.

Hab. Australia.

Of very simple oval form, obtusely rounded at each end.

Species 68. (Mus. Cuming.)

MACTRA SAULIÆ. *Mact. testā ovatā, subtriangulā, aequilaterali, depressā, planā, extremitatibus rotundatā et hianle, sub epidermide sericeā albā fusco-violaceo-radiatā; lunulā areāque angustis, maculā fusco-violaceā notatis; valvis tenuibus, fragilibus, transversim tenuistriatis; sinu pallii lato.*

SAUL'S MACTRA. Shell ovate, subtriangular, equilateral, depressed, flat, rounded and gaping at the extremities, white, rayed with brown-violet, beneath a silky epidermis; lunule and area narrow, marked with fuscous-violet; valves thin and fragile, transversely finely striated; sinus of the mantle broad.

GRAY, *Ann. and Mag. Nat. Hist.* 1837.

Hab. Sengal.

A very distinct and well-marked species, remarkable for its fine transversely fibrous silky epidermis.

Species 69. (Mus. Cuming.)

MACTRA TRISTIS. *Mact. testā suborbiculari, valdè compressā, inaequilaterali, utrinque hianle, squalidè albā, suberosā, versus marginem epidermide fusco indutā, transversim irregulariter densè striatā, latere antico brevi, rotundato, postico duplo longiore, leviter flexuoso-angulato; umbonibus minimis, approximatis; lunulā areāque indistinctis; sinu pallii magno, obtuso, basi dilatato.*

THE SAD MACTRA. Shell suborbicular, very compressed,

inequilateral, gaping at each end, dirty-white, sub-eroded, covered towards the margin with a brown epidermis, transversely irregularly closely striated, anterior side short and rounded, posterior twice as long, slightly flexuously angled; umbones very small, approximated; lunule and area indistinct; sinus of the mantle large, obtuse, dilated at the base.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Moreton Bay, Australia.

A very compressed suborbicular shell, rough and eroded, except where covered with a dark olive-brown fibrous epidermis.

Species 70. (Mus. Cuming.)

MACTRA EXPLANATA. *Mact. testā ovato-subtrigona, compressā, eburneā, lævigatā, nitente, latere antico lato, obtuso, paulo breviorē, postico declivi, attenuato, hiante; umbonibus parvis, approximatis; lunulā lanceolatā, medio elevatā, areā angustā, concavā, angulā bicarinatā utrinque notatā; cardine peculiariter lato et excavato; sinu pallii lato, profundiusculo, obtusissimo.*

THE SMOOTH MACTRA. Shell ovately subtriangular, compressed, ivory-white, smooth, shining, anterior side broad, obtuse, rather the shorter, posterior slanting and attenuated, gaping; umbones small, approximated; lunule lanceolate, raised in the middle, area narrow, concave, with a two-keeled angle on each side; hinge peculiarly broad and excavated; sinus of the mantle broad, rather deep, very obtuse.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Swan River, Australia.

A subpellucid shining ivory-white compressed shell, with a very peculiar hinge, the lateral teeth in each valve forming an unusually broad lamellar trench.

Species 71. (Mus. Cuming.)

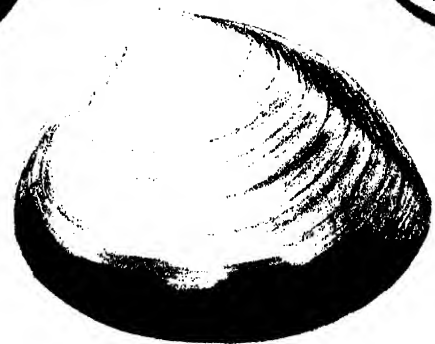
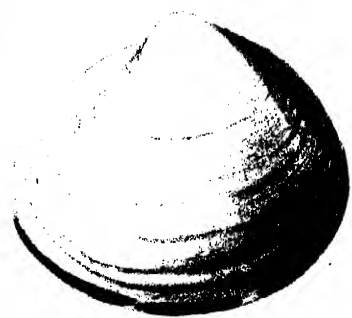
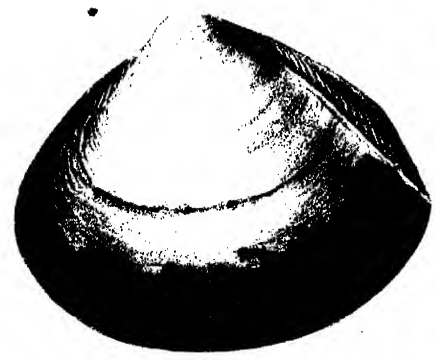
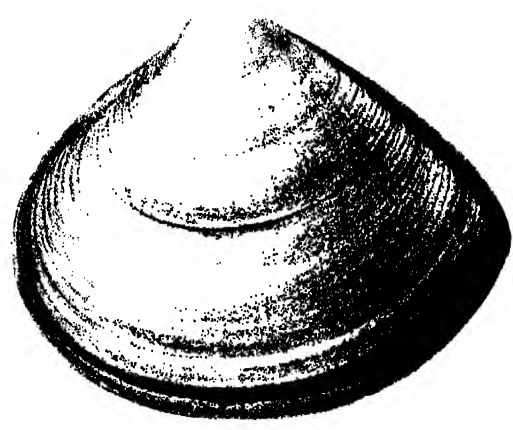
MACTRA EGENA. *Mact. testā ovato-transversā, compressā, inæquilateralī, candidissimā, transversim irregulariter striatā, latere antico brevi, angustato, supernè declivi, latere postico latiore; areā angustissimā, profundā, utrinque angulum irregulariter plicato-notati, lunulā lanceolatā; umbonibus parvis, approximatis; sinu pallii profundo, lato, digitiformi, dimidiam partem valvarum attingente.* ●

THE DISTRESSED MACTRA. Shell ovately transverse, compressed, inequilateral, very white, transversely irregularly striated, anterior side short, narrowed, slanting at the upper part, posterior side broader; area very narrow, deep, with an irregularly plaited obtuse angle on each side, lunule lanceolate; umbones small, approximated; sinus of the mantle deep, broad, finger-shaped, reaching to the half of the valve.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

Somewhat resembling *M. Dysoni*, but more inequilateral, and roughly plicated on each side the cardinal area, which is pressed inwards.



MACTRA.

PLATE XV.

Species 72. (Mus. Brit.)

MACTRA BILINEATA. *Mact. testā oblongo-ovata, subcompressā, pellucido-albā, epidermide sericeā sparsim indutā, inequilaterali, latere antico rotundato, postico longiore, subobsoleto concavo-angulato, angulo utrinque lineari-carinato; lunulā viz nullā.*

THE BILINEATED MACTRA. Shell oblong-ovate, rather compressed, transparent white, covered here and there with a silky epidermis, inequilateral, anterior side rounded, posterior longer, somewhat obsoletely concavely angled, angle linearly keeled down each side; scarcely any lunule.

C. B. ADAMS (Mns. Cuning.).

Hab. Jamaica.

A clear subtransparent shell, partially covered with a slight silky epidermis, characterized on the posterior side by a bi-linearly keeled angle.

Species 73. (Mus. Brit.)

MACTRA TELLINOIDES. *Mact. testā subtrigono-ovata, opaco-albā, lævigatā, epidermide fusciscentē sparsim indutā, inequilaterali, latere antico brevi, rotundato, postico latē angulato et producto; umbonibus acutis; lunulā viz nullā.*

THE TELLEN-LIKE MACTRA. Shell somewhat triangularly ovate, opaque-white, smooth, sparingly covered with a light brown epidermis, inequilateral, anterior side short, rounded, posterior broadly angled and produced; umboes sharp, scarcely any lunule.

CONRAD, Journ. Acad. Nat. Sci. Philadelphia.

Hab. —?

This species differs from the following in being of an opaque chalk-white and smooth, whilst that is shining white and strongly striated.

Species 74. (Mus. Brit.)

MACTRA SUBLANCEOLATA. *Mact. testā subtrigono-ovata, albā, inequilaterali, lateribus ambobus subangulatis, latere antico transversim striato, postico longiore, sublanceolato, minus striato; lunulā indistinctā, areā posticali latā, subconcava.*

THE SUBLANCEOLATE MACTRA. Shell somewhat trian-

gularly ovate, white, inequilateral, both sides rather angular, anterior side transversely striated, posterior longer, sublanceolate, less striated; lunule indistinct, posterior area broad, rather concave.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

A shining white species, sharply transversely striated, chiefly on the posterior side, with a rather broad wedge-like area on the posterior side.

Species 75. (Mus. Cuning.)

MACTRA CORNEA. *Mact. testā subtrigona, tenui, ventricosā, transversim tenuistriatā, striis irregularibus, ad latera rugosis; incarnato-albā, obscure concentricē fasciatā; subæquilaterali, latere antico rotundato, postico longiore, subproducto; lunulā amplā, subindistinctā; umbonibus conspicuis, confertis.*

THE HORNY MACTRA. Shell somewhat triangular, ventricose, transversely finely striated, striae irregular, rugose at the sides; flesh-white, obscurely concentrically banded; nearly equilateral, anterior side rounded, posterior longer, somewhat produced; lunule large, rather indistinct; umboes conspicuous, close-set.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

A light flesh-tinged shell, quite distinct in its characters from any other species.

Species 76. (Mus. Brit.)

MACTRA MURCHISONI. *Mact. testā ovata, subventricosā, solidiusculā, albā, lævigatā, epidermide stramineā versus marginem indutā, subæquilaterali, latere antico rotundato, postico sublongiore, leviter angulato-producto, angulo lineari-carinato; lunulā peramplā, corrugato-lirata; umbonibus confertis.*

MURCHISON'S MACTRA. Shell ovate, subventricose, rather solid, white, smooth, covered towards the margin with a straw-coloured epidermis, nearly equilateral, anterior side rounded, posterior rather the longer, slightly angularly produced, angle linearly keeled; lunule very large, wrinkle-ridged; umboes close-set.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. New Zealand; Major Greenwood.

A solid opaque-white shell, covered towards the margin with a clear thin straw-coloured epidermis, having the anterior lunule very large and peculiarly wrinkle-edged.

Species 77. (Mus. Brit.)

MACTRA BYRONENSIS. *Mact. testā oratā, solidiusculā, gibbosā, opaco-albā, æquilaterali, antice rotundatā, postice obtusè subangulatā; lunulā indistinctā; umbonibus parvis, subremotis.*

THE BYRON MACTRA. Shell ovate, rather solid, gibbous, opaque-white, equilateral, anteriorly rounded, posteriorly obtusely slightly angled; lunule indistinct; umboes small, rather distant.

Mulinia Byronensis, Gray in Brit. Mus.

Hab. South America; Capt. Lord Byron.

An opaque-white solid shell, of somewhat gibbous oval form, with little or no sculpture or inequality of growth.

Species 78. (Mus. Brit.)

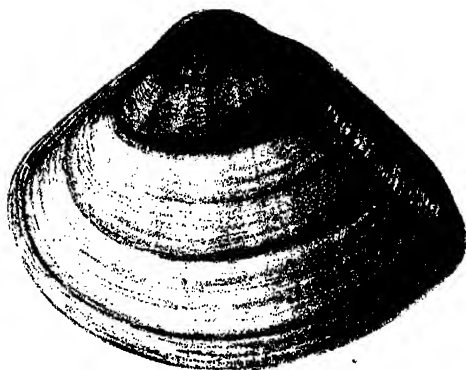
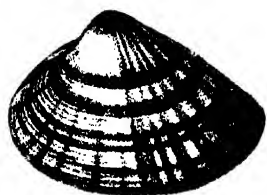
MACTRA EXALBIDA. *Mact. testā subquadrato-oratā, reflexus marginem compressā, calcareo-albā, irregulariter rugoso-striatā, epidermide tenui stramineā sparsim indutā, inæquilaterali, latere antico brevi, rotundato, postico obliquè rotundato, multo longiore; lunulā cis nullā; umbonibus subremotis.*

THE VERY WHITE MACTRA. Shell somewhat squarely ovate, compressed towards the margin, chalk-white, irregularly roughly striated, sparingly covered with a thin straw-coloured epidermis, inequilateral, anterior side short, rounded, posterior obliquely rounded, much longer; scarcely any lunule; umboes rather distinct.

Mulinia exalbida, Gray in Brit. Mus.

Hab. South America; Capt. P. P. King.

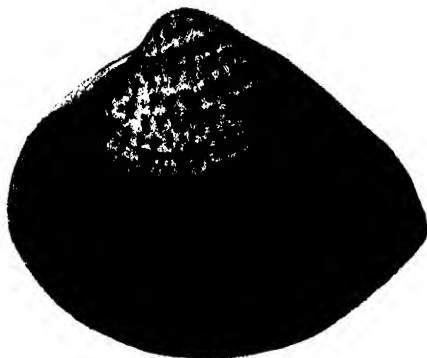
Of an eroded chalk-white character, roundly oblong-produced on the posterior side.



83



84



85

MACTRA.

PLATE XVI.

Species 79. (Mus. Cuming.)

MACTRA GIBBOSULA. *Mact. testâ subtrigono-cordatâ, teneantâ, gibbosa, inaequaliterali, transversim filiformi-striatâ, versus umbones levigatâ, albâ, ferrugineo-fuscescente pallidissimâ tinctâ, latere antico brevi, postico declivi, obtusè angulatâ; umbonibus tumidis, utrinque angulatis, approximatis; lunulâ areâque latiusculis, eleganter plicatis, medio elevatis.*

THE GIBBOUS MACTRA. Shell somewhat triangularly cordate, rather thin, gibbous, inequilateral, transversely thread-like striated, smooth towards the umbones, white, faintly tinged with rust-brown, anterior side short, posterior slanting, obtusely angled; umbones swollen, angled on each side, close; lunule and area rather broad, elegantly plicated, raised in the middle.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Indian Seas.

A thin swollen species, having somewhat the general aspect of a *Cardium*.

Species 80. (Mus. Cuming.)

MACTRA DECORA. *Mact. testâ ovato-transversâ, turgidâ, inaequaliterali, nitidâ, albo et violaceo eleganter radiatâ et transversim zonatâ, latere antico brevior, obtuso, transversim tenuè regulariter sulcato, sulcis in medio evanescentibus; umbonibus tumidiusculis, atro-violaceis, parum distantibus; lunulâ albo et violaceo bicoloratâ, regulariter plicatâ, areâ concaviusculâ, tenuiplicatâ.*

THE HANDSOME MACTRA. Shell ovately transverse, swollen, inequilateral, shining, elegantly rayed and transversely zoned with white and violet, anterior side the shorter, obtuse, transversely finely irregularly grooved, grooves disappearing towards the middle; umbones rather swollen, dark violet, but little distant; lunule two-coloured with white and violet, regularly plicated, area rather concave, thinly plicated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

Of a *Cytherea* aspect, grooved on the anterior half, elegantly banded and faintly rayed with cinereous violet.

Species 81. (Mus. Cuming.)

MACTRA LUZONICA. *Mact. testâ transversim trigonâ, æquilaterali, subsymmetrice turgidâ, æqualiter utroque latere declivi, latere antico subobsoletè sulcato, sulcis in medio plus minus evanescentibus, nitidâ, pallidè fuscâ vel albo-rufescente, in latere postico castaneâ, extremilatibus æqualiter obtusis; umbonibus minimis, acutis, apice violaceis; lunulâ areâque subæqualibus, regulariter plicatis, violaceo maculatis.*

THE LUZON MACTRA. Shell transversely triangular, equilateral, rather symmetrically swollen, slanting equally on each side, anterior side faintly grooved, the grooves more or less fading in the middle, shining, pale brown or whitish-red, chestnut on the posterior side, extremities equally obtuse; umbones very small, sharp, violet at the apex; lunule and area nearly equal, regularly plicated, spotted with violet.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Island of Luzon, Philippines.

A smooth reddish-ash fawn shell, violet-tipped at the umbones, chiefly remarkable for its equilateral oblong triangular form.

Species 82. (Mus. Cuming.)

MACTRA MERA. *Mact. testâ ovato-trigonâ, turgidâ, levigatâ, nitidâ, inaequaliterali, corneo-flavescente, ad umbones rufescente, zonulis transversalibus saturatioribus distanter interruptâ, intus corneo-rufescente, latere antico paulo brevior, obtuso, supernè declivi et convexiusculo, postico attenuato, valdè declivi, umbones versus convexiusculo; umbonibus depressis, parum obliquis, approximatis, acutis; lunulâ areâque ovatis, tumidiusculis, regulariter plicatis.*

THE PLAIN MACTRA. Shell ovately triangular, rather swollen, smooth, shining, inequilateral, horny-yellowish, reddish at the umbones, distantly interrupted with darker transverse zones, interior horny-red, anterior side a little the shorter, obtuse, slanting and rather convex at the upper part, posterior side attenuated, very slanting, rather convex towards the umbones; umbones depressed, a little oblique, approximated, sharp; lunule and area ovate, rather swollen, regularly plicated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China Sea.

A subtriangular rather swollen shell, of a peculiar livid rose hue, irregularly obscurely banded across.

Species 83. (Mus. Cuming.)

MACTRA ANGULIFERA. *Mact. testâ ovato-trigonâ, transversâ, compressâ, utroque latere hiantè, subæquilaterali, candidâ, nitidâ, transversim obsolete irregulariter striatâ, latere antico breviorè, obtuso, supernè concaviusculo, postico declivi, brevè, truncato, angulo acuto angusto obliquè decurrente; umbonibus brevibus, depressis, obliquis, tenuè regulariter plicatis; lunulâ ovalâ, levigatâ, concaviusculâ, arâ angustâ, concavâ.*

THE ANGLED MACTRA. Shell ovately triangular, transverse, compressed, gaping on both sides, nearly equilateral, white, shining, transversely obsolete irregularly striated, the anterior side the shorter, obtuse, rather concave at the upper part; posterior slanting, short, truncated, with a sharp narrow angle running down obliquely; umboes short, depressed, oblique, thinly regularly plicated; lunule ovate, smooth, rather concave, area narrow, concave.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Island of Ticao, Philippines; Cuming.

A very compressed shining white species, with a singularly oblique keel-edged area.

Species 84. (Mus. Cuming.)

MACTRA SYMMETRICA. *Mact. testâ trigonâ, æquilaterali, turgidulâ, levigatâ, nitidâ, ad marginem inferiorem transversim sulcatâ, pallidè flavicante, lateribus æqualiter declivibus et attenuatis, supernè convexiusculis, margine inferiore regulariter arcuato; lunulâ arcuâque æqualibus, eleganter plicatis; umbonibus minimis, acutis, oppositis, anticè maculâ violaceâ notatis.*

THE SYMMETRICAL MACTRA. Shell triangular, equilateral, rather swollen, smooth, shining, transversely grooved at the lower margin, pale yellowish, sides equally slanting and attenuated, rather convex at the upper part, lower margin regularly arched; lunule and area equal, elegantly plicated; umboes very small, sharp, opposite, marked in front with a violet spot.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. ———?

A plain *Donax*-like species, of a uniform yellowish stone-colour, particularly neatly plaited on the lunule and area.

Species 85. (Mus. Cuming.)

MACTRA REEVEI. *Mact. testâ rotundato-trigonâ, inflatâ, solidâ, subæquilaterali, transversim obsolete striatâ, epidermide tenui stramineâ tenuè striatâ lamellosâ indutâ, albo-rufescente, maculis sparsis inequalibus fuscis ornatâ, posticè castaneo-tinctâ, latere antico paulo breviorè, latè rotundato, postico attenuato, declivi, brevè truncato; umbonibus prominulis, approximatis; lunulâ arcuâque subindistinctis, simplicibus.*

REEVE'S MACTRA. Shell rotundately triangular, inflated, solid, nearly equilateral, transversely obsolete striated, covered with a thin finely striated lamellous straw-coloured epidermis, whitish-red, ornamented with a few unequal brown spots, posteriorly chestnut-stained, anterior side a little the shorter, broadly rounded, posterior attenuated, slanting, shortly truncated; umboes rather prominent, approximated; lunule and area rather indistinct, simple.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. New Caledonia.

Allied to *M. maculata*, but more solid and *Cythera*-like, less attenuated posteriorly.

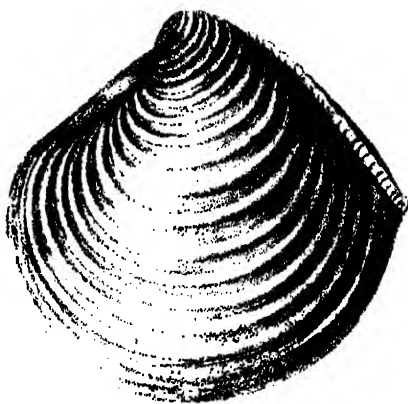


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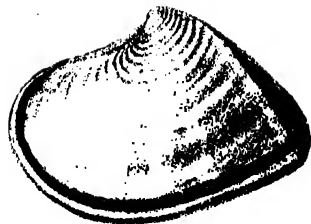
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88



91



92

MACTRA.

PLATE XVII.

Species 86. (Mus. Cuming.)

MACTRA CONTRARIA. *Mact. testā ovato-trigonā, æquilaterali, compressiusculā, nitidā, transversim obsolete tenuissimè striatā, utroque latere convexo, declivi, subangulatis, margine inferiore valdè arcuato; lunulā areniq̃ue sulcatis, sulcū lunulæ profundis, infernè convergentibus, rugis brevibus ad extremitate anticā, albidā; umbonibus minimis, violaceo-tinctis.*

THE CONTRARY MACTRA. Shell ovately triangular, equilateral, rather compressed, shining, transversely obsoletely very finely striated, rather convex, slanting and slightly angled on both sides, lower margin very much arched; lunule and area grooved, grooves of the lunule deep, converging at the lower part, with short wrinkles at the anterior extremity, whitish; umboes very small, tipped with violet.

DESHAYES, PRO. Zool. Soc. 1854.

Hab. — ?

A rather thin triangularly compressed shell, peculiarly plait-wrinkled at the anterior extremity, with the umboes tipped in a characteristic manner with violet.

Species 87. (Mus. Cuming.)

MACTRA INÆQUALIS. *Mact. testā ovato-transversā, subtrigonā, inequilateralī, compressiusculā, ad marginem inferiorem acutiusculā, politā, nitente, epidermide flavescente corneā indutā, latere antico longiore, subattenuato, obtuso, postico angulato; lunulā areāque tenniplicatis; umbonibus brevibus, acutis, oppositis.*

THE UNEQUAL MACTRA. Shell ovately transverse, subtriangular, inequilateral, rather compressed, rather sharp at the lower margin, polished, shining, covered with a yellowish-horny epidermis, anterior side the longer, rather attenuated, and obtuse, posterior angled; lunule and area thinly plicated; umboes short, sharp, opposite.

DESHAYES, PRO. Zool. Soc. 1854.

Hab. China Sea.

A smooth pallid shell, covered towards the margin with a warm yellowish-horny epidermis, peculiar in having the anterior side longer than the posterior.

Species 88. (Mus. Cuming.)

MACTRA TRANSVERSA. *Mact. testā ovato-oblongā, trans-*

versā, subæquilaterali, solidiusculā, compressā, albidā, epidermide squalidè flavicante, transversim regulariter sulcatā, latere antico declivi, subacuminato, postico angulo acuto infernè terminato, obliquè truncato, angulo decurrente; umbonibus parvis, acutis, oppositis.

THE TRANSVERSE MACTRA. Shell ovately oblong, transverse, nearly equilateral, rather solid, compressed, whitish, covered with a dull yellowish epidermis, regularly transversely grooved, anterior side slanting, rather acuminated, posterior terminating at the lower part with a sharp angle, obliquely truncated, with an angle running down; umboes small, sharp, opposite.

DESHAYES, PRO. Zool. Soc. 1854.

Hab. — ?

A triangularly compressed shell, of rather solid growth, transversely grooved, covered with a dull ochraceous epidermis.

Species 89. (Mus. Cuming.)

MACTRA ELEGANS. *Mact. testā rotundato-trigonā, tumidā, tenui, diaphano-albā, epidermide fibrosā ad marginem indutā, æquilaterali, anticè rotundatā, posticè subrotatā et lamellato-carinatā, transversim concentricè undique costatā; lunulā cordatā, concavā, levigatā, areā angustā, concavā, utrinque carinatā; umbonibus appropinquatis.*

THE ELEGANT MACTRA. Shell rotundately triangular, swollen, thin, diaphanous-white, covered at the margin with a fibrous epidermis, equilateral, anteriorly rounded, posteriorly slightly beaked and lamellately keeled, transversely concentrically ribbed throughout; lunule heart-shaped, concave, smooth, area narrow, concave, keeled on each side; umboes close.

SOWERBY, Tankerville Catalogue, Appendix, p. 2. pl. 1. f. 3.

Hab. Florida.

This truly elegant species, first described and figured by Mr. Sowerby in the Tankerville Catalogue, is of a triangularly globose form, and of thin diaphanous-white substance, prominently concentrically ribbed throughout.

Species 90. (Mus. Cuming.)

MACTRA SUBTRUNCATA. *Mact. testā ovato-subtrigonā, inequilateralī, transversim striato-sulcatā, sub epidermide sordidè flavescente cretaceo-albā, latere antico ro-*

May, 1854.

tundato, postico subrostrato, longiore; areâ lunulâque subamplis, striatis; ligamento extus conspicuo; umbonibus approximatis.

THE SUBTRUNCATE MACTRA. Shell ovately subtriangular, inequilateral, transversely striately grooved, chalk-white beneath a dirty-yellowish epidermis, anterior side rounded, posterior slightly beaked, longer; area and lunule rather large, striated; ligament conspicuous without; umbones approximated.

MONTAGU, Testacea Britannica, p. 93, and Sup. p. 37. pl. 27. f. 1.

Trigonella subtruncata, Da Costa.

Macra lactea, Poli.

Macra truncata, Brown.

Macra deltoides, Collard.

Spisula subtruncata, Gray.

Hab. European Seas.

A rather solid epidermis-covered shell, somewhat resembling *Gnathodon* in general aspect.

Species 91. (Mus. Cuming.)

MACTRA RADIIOLATA. *Macr. testâ trigonâ, obliquâ, inequilaterali, turgidâ, cordiformi, sub epidermide flavescente tenuissimâ albâ, roseo radiolatâ, latere antico paulo brevior, latè rotundato, postico rapidè declivi, attenuato; lunulâ areâque convexiusculis, regulariter plicato-striatis; umbonibus tumidis, prominentibus, parum obliquis.*

THE FINELY-RAYED MACTRA. Shell triangular, oblique, inequilateral, swollen, heart-shaped, white, finely

rayed with rose beneath a very thin yellowish epidermis, anterior side a little the shorter, broadly rounded, posterior rapidly slanting, attenuated; lunule and area rather convex, regularly plicately striated; umbones swollen, prominent, a little oblique.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Island of Zebu, Philippines; Cuming.

Distinguished by its shortly triangular form, and delicately red-rayed painting.

Species 92. (Mus. Cuming.)

MACTRA REEVESII. *Macr. testâ elongato-transversâ, donaciformi, inequilaterali, compressâ, albâ, ad umbones elegantè concentricè plicatâ, deinde lævigatâ, nitidâ, latere antico longiore subarcuato et rostrato, postico obliquè truncato, angulatis, lateribus ambobus hiantibus; lunulâ impressâ, lanceolato-ovatâ, areâ magnâ, concavâ, utrinque carinatâ.*

REEVES'S MACTRA. Shell elongately transverse, donac-shaped, inequilateral, compressed, white, concentrically elegantly plaited about the umbones, then smooth, shining, anterior side rather arched and beaked, posterior obliquely truncated, angled, both sides gaping; lunule impressed, lanceolately ovate, area rather large, concave, keeled on each side.

GRAY, Ann. and Mag. Nat. Hist. 1837, p. 372.

Hab. Malacca.

A very characteristic peculiarly oblong arched transverse shell, of subtransparent substance, gaping at both ends.



97

98



100



MACTRA.

PLATE XVIII.

Species 93. (Mus. Cuming.)

MACTRA ANGUSTA. *Mact. testā ovato-transversā, angustā, subtrigōnā, subaequilaterali, compressā, albā, tenui, fragili, transversim regulariter striatā, latere antico paulo breviorē, obtuso, superne concaviusculo, postico superne declivi, attenuato; areā angustā, elongatā, planulatā, utrinque liratā; umbonibus minimis, parum obliquis, regulariter undato-plicatis; lunulā minimā, lanceolatā.*

THE NARROW MACTRA. Shell ovately transverse, narrow, rather triangular, nearly equilateral, compressed, white, thin, fragile, transversely regularly striated, anterior side a little the shorter, obtuse, rather concave at the upper part, posterior side slanting at the upper part, attenuated; area narrow, elongated, flat, with a ridge on each side; umboes very small, a little oblique, regularly wave-plaited; lunule very small, lanceolate.

DESHAYES, PRO. Zool. Soc. 1854.

Hab. Panama; Cuming.

A slender subtransparent *Tellin*-like shell, delicately wave-plaited around the umboes.

Species 94. (Mus. Cuming.)

MACTRA TRIANGULA. *Mact. testā gibboso-trigōnā, Corbuliformi, crassiusculā, inequilaterali, utrinque obtusē curvatā, transversim sulcato-striatā, sordidē albā, latere antico rotundato, postico concavo-attenuato, subrostrato; umbonibus tumidis, approximatis; lunulā areāque amplis, latis.*

THE TRIANGULAR MACTRA. Shell gibbously triangular, Corbula-shaped, rather thick, inequilateral, obtusely keeled on each side, transversely groove-striated, dull white, anterior side rounded, posterior concavely attenuated, somewhat beaked; umboes swollen, close; lunule and area large and broad.

RENIERI, Philippi, Enum. Moll. Sicil. p. 11.

Mactra Eucinica, Krynicki.

Hab. Mediterranean.

A rather solid Corbula-shaped species, strongly striated across, of a dull stone-colour.

Species 95. (Mus. Cuming.)

MACTRA OPPOSITA. *Mact. testā trigōnā, cuneiformi, aequilaterali, transversim striatā, ad umbones lævigatā, ni-*

tente, violaceo-albā, obscure fasciatā, pallidē roseo radiatā; lunulā areāque subamplis, æqualibus, eleganter striatis, violaceo-fusco lineatis; umbonibus approximatis, intense violaceis.

THE OPPOSITE MACTRA. Shell triangular, wedge-shaped, equilateral, transversely striated, smooth and shining at the umboes, violet-white, obscurely banded, rayed with pale rose; lunule and area rather large, equal, elegantly striated, stained with violet-brown; umboes close, deep violet.

DESHAYES, PRO. Zool. Soc. 1854.

Hab. Island of Luzon, Philippines; Cuming.

A triangular subequilateral species, faintly rose-rayed, peculiarly stained with violaceous-brown on the area and lunule, with the umboes tipped with very dark violet.

Species 96. (Mus. Cuming.)

MACTRA LURIDA. *Mact. testā subgloboseā, tumidā, inequilaterali, pallidē cinerā, roseo obscure tenuiradiatā, versus umbones incurvato-lineatā, latere antico rotundato, postico arcuato-producto; lunulā areāque eleganter striatis, violaceo-fuscescente lineatis; umbonibus subobliquis, approximatis, intus intense violaceo-radiatā.*

THE LURID MACTRA. Shell subglobose, swollen, inequilateral, pale ash, obscurely finely rayed with rose, flesh-tinged towards the umboes, anterior side rounded, posterior arcuately produced; lunule and area elegantly striated, stained with light violet-brown; umboes rather oblique, opposite, inferior deep violet-rayed.

PHILIPPI, Abbild. und Besch. Mactra, p. 136. pl. 3. f. 3.

Hab. Island of Liewkiew, China Sea; Philippi. Island of Negros, Philippines; Cuming.

A swollen gibbous species, flesh-tinged about the umboes, and richly stained in the interior with broad violet rays.

Species 97. (Mus. Cuming.)

MACTRA ATTENUATA. *Mact. testā ovato-trigōnā, transversā, tenui, turgidā, inequilaterali, transversim irregulariter densē striatā, lividē violaceā, ad umbones atro-violaceā, intus pallidē violaceā, latere antico breviorē, obtuso, superne declivi, latere postico declivi, truncato; umbonibus brevibus, parum obliquis, approxi-*

malis; areâ elongato-ovalâ, lunulâque tenuistriatis; cardine angusto, fossulâ profundâ; dentibus laterali-bus lamellosis, prominentibus, antico multo brevioribus; sinu pulli lato, rix excavato.

THE ATTENUATED MACTRA. Shell ovately triangular, transverse, thin, swollen, inequilateral, transversely irregularly thickly striated, livid-violet, blackish-violet at the umboes, paler violet within, anterior side the shorter, obtuse, slanting at the upper part, posterior side slanting, truncated; umboes short, a little oblique, approximated; area elongately ovate, and with the lunule finely striated; hinge narrow, pit deep; lateral teeth lamellous, prominent, the anterior much the shorter; sinus of the mantle broad, scarcely excavated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

Of a peculiar dark livid ash-violet colour within and without, somewhat unusually attenuated towards the posterior extremity.

Species 98. (Mus. Cuming.)

MACTRA CORNICULOIDES. *Macl. testâ trigono-subquadratâ, crassiusculâ, turgidâ, subæquilaterali, licio-albidâ, ad umbones intensè carulatâ, latere antico*.

lunulato, postico concavo-rostrato; lunulâ areâque magnâ, latâ, subconcaris; umbonibus lunatis, approximatâ, intus intensè cæruleo-violaceâ.

THE LITTLE BASKET MACTRA. Shell triangularly subquadrate, rather thick, swollen, nearly equilateral, livid white, deep blue at the umboes, anterior side rounded, posterior concavely beaked; lunule and area large, broad, subconcave; umboes swollen, close, interior deep blue-violet.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Ceylon; E. L. Layard.

A short triangularly gibbous species, rather thick, deep blue-violet at the umboes, and especially deep-dyed with the same colour in the interior.

Species 99. (Mus. Cuming.)

MACTRA LATERALIS. *Macl. testâ trigono-ovalâ, inæquilateralî, transversim subirregulariter sulcato-striatâ, squalidè albâ, epidermide fuscescente partim indutâ, latere antico brevi, obtusè angulatâ, postico attenuato,*

subrostrato; lunulâ areâque subamplis, densè striatis; umbonibus angulatis, approximatâ.

THE LATERAL MACTRA. Shell triangularly ovate, inequilateral, transversely rather irregularly groove-striated, dirty-white, partially covered with a brownish epidermis, anterior side short, obtusely angled, posterior attenuated, somewhat beaked; lunule and area rather large, closely striated; umboes angular, approximated. SAY, Journ. Acad. Nat. Sci. Philadelphia, vol. ii. p. 309. *Hab.* Massachusetts, United States; Gould.

A simple triangularly ovate species, of a stone-white hue, attenuately produced at the posterior end.

Species 100. (Mus. Cuming.)

MACTRA INCONGRUA. *Macl. testâ trigonâ, gibbosâ, subæquilateralî, tenuiculâ, lævigatâ, calcaro-albâ, lateribus obtusè angulatis, postico subproducto; lunulâ areâque acutis, latiusculis, eleganter plicato-striatis; umbonibus approximatâ.*

THE INCONGRUOUS MACTRA. Shell triangular, gibbous, nearly equilateral, rather thin, smooth, chalk-white, sides obtusely angled, the posterior rather produced; lunule and area ovate, rather broad, elegantly plicately striated; umboes close.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Island of Luzon, Philippines; Cuming.

The chief peculiarity of this species, consists in the lunule and area being elegantly plicately striated, while the rest of the shell is smooth.

Species 101. (Mus. Cuming.)

MACTRA ELLIPTICA. *Macl. testâ trigono-ellipticâ, compressâ, crassiusculâ, subæquilateralî, transversim rudè plicatâ et striatâ, lateribus rotundatis, antico sublongiore; lunulâ areâque angustis, indistinctis; umbonibus minimis, approximatâ.*

THE ELLIPTIC MACTRA. Shell triangularly elliptic, compressed, rather thin, nearly equilateral, transversely rudely plicated and striated, sides rounded, anterior rather the longer; lunule and area narrow, indistinct; umboes very small, close.

BROWN, Illus. Conch. Brit. p. 109. pl. 41. f. 6.

Hab. British and French Seas.

A rather solid rudely plicated compressed shell, with the anterior side rather the longer, the umboes being very small and the lunule and area not very distinct.



102



103



104



105



106



107



108



109



110



111

MACTRA

PLATE XIX.

Species 102. (Mus. Cuming.)

MACTRA NUCLEUS. *Mact. testā trigono-quadratā, compressā, æquilaterali, squalidē albā; umbonibus subnucronatis; lunulā areāque angustis, declivis, indistinctis.*

THE KERNEL MACTRA. Shell triangularly square, compressed, equilateral, dirty white; umboes rather pointed; lunule and area slanting, narrow, indistinct. CONRAD, Journ. Acad. Nat. Sci. Philadelphia, vol. 6. pl. 11. f. 4.

Hab. Bay of Manilla; Cuming. North America; Conrad.

A minute triangularly square compressed species, the smallest of the genus.

Species 103. (Mus. Cuming.)

MACTRA CORBULOIDES. *Mact. testā trigono-ovalā, gibbosiusculā, inæquilaterali, lævigatā, albiā, nitente, latere antico rotundato, postico latē trigono, arcuato-rostrato; lunulā minimā, areā marinā.*

THE CORBULA-LIKE MACTRA. Shell triangularly ovate, rather gibbous, inequilateral, smooth, white, shining, anterior side rounded, posterior broadly angled, arcuately beaked; lunule very small, area very large.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

Distinguished by a broad concavely beaked area, while the lunule is almost obsolete.

Species 104. (Mus. Cuming.)

MACTRA ROSTRATA. *Mact. testā trigonā, gibbosiusculā, inæquilaterali, sordidē albā, lævigatā, latere antico rotundato, posteriore angulato-rostrato; lunulā vix nullā, areā magnā, latā.*

THE BEAKED MACTRA. Shell triangular, rather gibbous, inequilateral, dull white, smooth, anterior side rounded, posterior angularly beaked; lunule scarcely any, area large and broad.

SPENGLER, Skrift. Naturh. Selsk. vol. 5. p. 115.

Hab. Moreton Bay, Australia; Strange.

Very similar to the preceding species, but shorter and more gibbous in form.

Species 105. (Mus. Cuming.)

MACTRA APHRODINE. *Mact. testā transversā, ovato-tri-*

gonā, tenui, depressiusculā, inæquilaterali, pallidē violaceā, zonulis transversis saturatioribus irregulariter interruptā, transversim regulariter eleganter striatā, latere antico paululum attenuato, superne recto, declivi, postico æqualiter obtuso; umbonibus minimis, acutis, albidis; cardine angusto, violaceo, utroque latere maculato; fossulā minimā, angustā, obliquā; dentibus lateralibus lamellosis; valvis intus viridē violaceis, in medio pallidioribus; impressione pallii margine inferiore remoto, sinu angusto, brevi, horizontali.

THE APHRODINE MACTRA. Shell transverse, ovately triangular, thin, rather depressed, inequilateral, pale violet, irregularly interrupted with darker transverse zones, transversely regularly elegantly striated, anterior side a little attenuated, straight at the upper part, slanting, equally obtuse with the posterior; umboes very small, sharp, whitish; hinge narrow, violet, spotted on both sides; pit very small, narrow, oblique; lateral teeth lamellous; valves deep violet within, paler in the middle; impression of the mantle with the lower edge remote, sinus narrow, short, horizontal.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China Seas; Belcher.

A peculiarly polished *Cytherea*-like species, of a livid grey colour, obscurely banded.

Species 106. (Mus. Cuming.)

MACTRA SCALPELLUM. *Mact. testā trigono-oblongā, tenui, valdē compressā, æquilaterali, lævigatā, nitente-albā, extremitatibus subattenuato-rotundatis; umbonibus minimis, approximatis; lunulā areāque angustissimis, indistinctis, plicato-striatis.*

THE LANCET MACTRA. Shell triangularly oblong, thin, very compressed, equilateral, smooth, shining white, extremities rather attenuately rounded; umboes very small, close; lunule and area very narrow, indistinct, plicately striated.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. New Zealand; Strange.

A thin compressed species with a white polished surface, having very much the appearance of a *Tellina*.

Species 107. (Mus. Cuming.)

MACTRA DOLABRATA. *Mact. testā oblongā, trigono-subquadratā, posticè paululum hiante, æquilaterali, sub lente tenuissimè transversim striatā, nitente-albā, latere antico rotundato-producto, postico abruptè declivi, obtusè angulato; umbonibus peculiariter compressis, approximatis; lunulā areāque subangustis, excavatis, lævibus.*

THE AXE-SHAPED MACTRA. Shell oblong, triangular, subquadrate, posteriorly a little gaping, equilateral, beneath the lens very finely transversely striated, shining white, interior side rotundately produced, posterior abruptly slanting, obtusely angled; umboes peculiarly compressed, close; lunule and area rather narrow, excavated, smooth.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

Peculiar in form, the anterior side being produced and rounded, while the posterior is abruptly slanting and angled.

Species 108. (Mus. Cuming.)

MACTRA SILICULA. *Mact. testā transversim ovatā, utrinque paululum hiante, subæquilaterali, transversim tenuistriatā, nitente-albā, marginem versus epidermide stramineā sericeā indutā, ad angulum posticum sordidā, extremitatibus rotundatis; lunulā areāque angustis, subexcavatis; umbonibus parvis, compressis.*

THE LITTLE HUSK MACTRA. Shell transversely ovate, a little gaping at each end, nearly equilateral, transversely finely striated, shining white, covered towards the margin with a silken straw-coloured epidermis, darker on the posterior angle, extremities rounded; lunule and area narrow, rather excavated; umboes small, compressed.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Mouth of the Gambia, West Africa (in the sands).

A transversely oval thin shining white shell, covered towards the margin with a straw-coloured epidermis, which on the posterior angle and area is wrinkled up into a darker colour.

Species 109. (Mus. Cuming.)

MACTRA CUNEATA. *Mact. testā trigono-ovatā, subobliquā, inæquilaterali, lævigatā, semipellucidā, undique purpureā aut cinereo-violaceā, latere antico rotundato, postico subangulato-producto; lunulā areāque distinctis, eleganter plicato-striatis; umbonibus prominulis.*

THE WEDGE-SHAPED MACTRA. Shell triangularly ovate, rather oblique, inequilateral, smooth, semi-pellucid, everywhere purple or ash, violet, anterior side rounded, posterior rather angularly produced; lunule and area distinct, elegantly plicately striated; umboes rather prominent.

CHEMNITZ, Conch. Cab. vol. 6. p. 221. pl. 22. f. 215.

Mactra purpurea, Spengler.

Hab. Nicobar.

A semitransparent glassy purple shell, smooth except on the area and lunule, which are elegantly striated.

Species 110. (Mus. Cuming.)

MACTRA HEPATICA. *Mact. testā transversim ovatā, gibbissimā, subæquilaterali, lævigatā, politā, ad latera sulcato-striatā, purpureo-lividā, latere antico rotundato, postico subattenuato, lunulā areāque subindistinctis, latis, striatis; umbonibus valdè tumidis.*

THE LIVER-COLOURED MACTRA. Shell transversely ovate, very gibbous, nearly equilateral, smooth, polished, grooved-striated at the sides, purple-livid, anterior side rounded, posterior slightly attenuated; lunule and area rather indistinct, broad, striated; umboes much swollen.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Island of Negros, Philippines; Cuming.

Chiefly distinguished by its swollen gibbous umboes, which gives the shell an *Arca*-like aspect.

Species 111. (Mus. Cuming.)

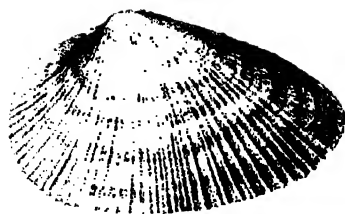
MACTRA APICINA. *Mact. testā trigono-ovatā, versus marginem compressā, æquilaterali, transversim sulcolatā, versus umboes lævigatā, albā, nitente, lateribus subæqualiter rotundatis; lunulā areāque magnis, eleganter plicato-striatis; umbonibus parvis, centralibus, oppositis, violaceo tinctis.*

THE TIPPED MACTRA. Shell triangularly ovate, compressed towards the margin, equilateral, transversely groove-ridged, smooth towards the umboes, white, shining, sides nearly equally rounded; lunule and area large, elegantly plicately striated; umboes small, central, opposite, tipped with violet.

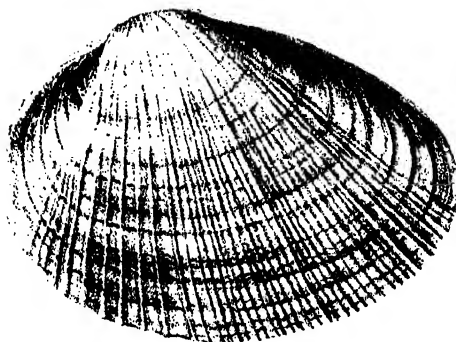
DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

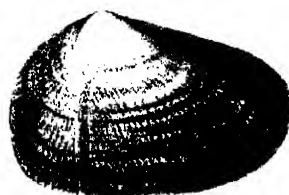
An equilateral wedge-shaped species, polished white, with the umboes tipped with violet.



116



116



117



118

MACTRA.

PLATE XX.

Species 112. (Mus. Cuming.)

MACTRA EGYPTIACA. *Mact. testā transversim oblongā, valdē inaequaliterali, utrinque hiantē, tenuiculā, candidā, versus extremitates epidermide tenui indutā, densē radiatim irregulariter acutē liratā, lirarum interstitiis cancellato-striatis, latere antico obtusē rotundato, postico multo longiore, attenuato-rotundato, compresso; extremitatibus liris parvis obliquē divergentibus exsculptis.*

THE EGYPTIAN MACTRA. Shell transversely oblong, very inequilateral, gaping at each end, rather thin, white, covered towards the extremities with a thin epidermis, densely radiately irregularly sharply ridged, interstices between the ridges cancellately striated, anterior side obtusely rounded, posterior much the longer, attenuately rounded and compressed; extremities sculptured with fine obliquely diverging ridges.

CHEMNITZ, Conch. Cab. vol. ii. p. 218. pl. 200. f. 1955-6.

Lutraria Egyptiaca, Hanley.

Hab. Ceylon; E. L. Layard.

This species, which M. Deshayes ascribes to the *M. Egyptiaca* of Chemnitz, should properly have another name. The specimen here figured is from Ceylon.

Species 113. (Mus. Cuming.)

MACTRA SOLANDRI. *Mact. testā transversim ovatā, subcuneiformi, inaequaliterali, tenui, candidā, irregulariter radiatim acutē liratā, liris posticis distantioribus et acutē elevatis, latere antico rotundato, postico longiore, hiantē; umbonibus subappressis.*

SOLANDER'S MACTRA. Shell transversely ovate, somewhat wedge-shaped, inequilateral, thin, white, irregularly radiately sharply ridged, posterior ridges more distant, and sharply raised, anterior side rounded, posterior longer, gaping; umboes rather appressed.

Spisula Solandri, Gray, Ann. and Mag. Nat. Hist. 1837. p. 373.

Hab. Moluccas.

A thin white shell, gaping at the posterior end, with a somewhat *Petricola*-like aspect; the posterior ridges are peculiar in being more distant and sharply raised.

Species 114. (Mus. Cuming.)

MACTRA CALIFORNICA. *Mact. testā transversim oblongā, inaequaliterali, lævigatā vel subrudē concentricē striatā, calcareo-albā, epidermide flavidā indutā, lateribus subaequaliter rotundatis, postico longiore; umbonibus minutis, approximatis.*

THE CALIFORNIAN MACTRA. Shell transversely oblong, inequilateral, smooth, or rudely concentrically striated, chalk-white, covered with a yellow epidermis, sides nearly equally rounded, posterior side the longer; umboes very small, close.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. California.

This species is not distinguished by any peculiarity of form or sculpture, and has very much the appearance of a small *Mya*.

Species 115. (Mus. Cuming.)

MACTRA RUGOSA. *Mact. testā transversē ovatā, gibbosā, utrinque hiantē, valdē inaequaliterali, fuscescente-albā, calcareā, radiatim irregulariter liratā, ad extremitates lævigatā, latere antico brevissimo, rotundato, postico oblongo, producto; umbonibus parvis, appressis, approximatis.*

THE ROUGH MACTRA. Shell transversely ovate, gibbous, gaping at each end, very inequilateral, brownish-white, chalky, radiately irregularly ridged, smooth at the extremities, anterior side very short, rounded, posterior oblong, produced; umboes small, appressed, close.

CHEMNITZ, Conch. Cab. vol. vi. p. 236. pl. 24. f. 236.

Lutraria rugosa, Lamarek.

Spisula rugosa, Gray.

Hab. Faro, Portugal.

A large rough species, very irregularly radiately ridged, except at the extremities, which are smooth.

Species 116. (Mus. Cuming.)

MACTRA THRACIOIDES. *Mact. testā ovatā, anticē gibbosā, utrinque hiantē, inaequaliterali, tenui, opaco-albā, concentricē densē fibroso-striatā, obliquē undulatim corrugato-plicatā, latere antico rotundato, postico*

compressè attenuato; lunulā subcordatā; umbonibus parvis, appressis.

THE THRACIA-LIKE MACTRA. Shell ovate, gibbous anteriorly, gaping at both ends, inequilateral, thin, opaque-white, concentrically densely fibrous-striated, obliquely undulately wrinkle-plaited, anterior side rounded, posterior compressly attenuated; lunule subcordate; umbos small, appressed.

ADAMS and REEVE, Zool. Voy. Samarang, Moll. p. 81. pl. 23. f. 8.

Hab. Eastern Seas; Belcher.

The chief peculiarity of this species consists in the waved rib-like plaits undulating upwards on the posterior side, contrary to the curious fibrous-like striæ of growth.

Species 117. (Mus. Cuming.)

MACTRA CAPILLACEA. *Mact. testā transversè oblongā, valdè inequilaterali, utrinque hiantē, tenui, candidā, epidermide stramineā indulā, concentricè rudè striatā, radiatim subtiliter undulato-corrugatim striatā, latere antico brevissimo, rotundato, postico compresso-producto, subrostrato; umbonibus parvis.*

THE STRINGY MACTRA. Shell transversely oblong, very inequilateral, gaping at both ends, thin, white, covered with a light straw-coloured epidermis, concentrically rudely striated, radiately finely wave-wrinkle striated, anterior side very short, rounded, posterior compressly produced, somewhat beaked; umbos small.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Philippines and mouth of the Indus.

A delicate posteriorly produced species, distinguished by a striking peculiarity of sculpture, the surface being rayed with fine close-set cross-waved wrinkled striæ. It has been found of a very much larger size than that of the shell here figured.

Species 118. (Mus. Cuming.)

MACTRA PELLUCIDA. *Mact. testā transversim oblongā, compressā, utrinque hiantē, inequilaterali, albā, sub lente minutissimè decussatim striatā, versus margines epidermide tenui flavicante indulā, latere antico rotundato, postico subproducto; umbonibus parvis, approximatis.*

THE PELLUCID MACTRA. Shell transversely oblong, compressed, gaping at both ends, inequilateral, white, beneath the lens very minutely finely decussately striated, covered towards the margins with a thin yellowish epidermis, anterior side rounded, posterior rather produced; umbos small, close.

CHEMNITZ, Conch. Cab. vol. vi. p. 235. pl. 24. f. 234.

Mactra depressa, Lamarck.

Hab. Bay of Manila.

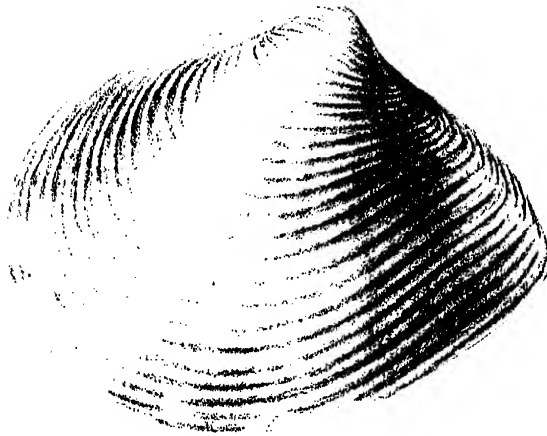
A smooth, rather compressed species, of which the surface has a somewhat silky appearance, occasioned by extremely minute crossed striæ.



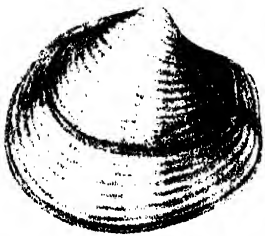
122



121



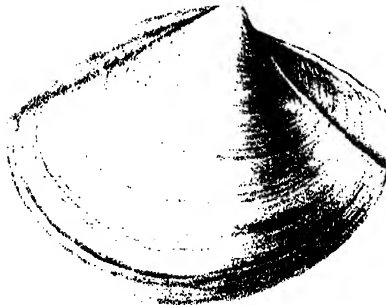
123



123



124



125

MACTRA.

PLATE XXI.

Species 119. (Mus. Cuming.)

MACTRA ROSTRALIS. *Mact. testā transversim ovatā, posticè compresso-rostratā, albā, tenuissimā, pellucido-vitreā, subæquilateralī, latere antico paulo breviorē, concentricè undato-plicatā, et tenuissimè obliquè striatā; lunulā distinctā; umbonibus parvis.*

THE BEAKED MACTRA. Shell transversely ovate, posteriorly compressly beaked, white, very thin, transparent, glassy, subequilateral, anterior side a little the shorter, concentrically undulately plicated, very finely obliquely striated; lunule distinct; umboes small.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. China Seas?

A very thin transparent glassy shell, beaked on the posterior side, which is the shorter, concentrically sculptured with waved plaits converging over the posterior side, as in *M. Thracioides*.

Species 120. (Mus. Cuming.)

MACTRA SENEGALENSIS. *Mact. testā transversim oblongā, compressā, inequilateralī, tenui, pellucido-vitreā, concentricè undato-plicatā et tenuissimè obliquè striatā, latere antico rotundato, postico longiore, carinato et truncato; umbonibus parvis.*

THE SENEGAL MACTRA. Shell transversely oblong, compressed, inequilateral, thin, transparent, glassy, concentrically wave-plaited, and very finely obliquely striated, anterior side rounded, posterior longer, keeled and truncated; umboes small.

PHILIPPI, Zeitschrift für Malac. 1849, p. 27.

Hab. Senegal.

A thin glassy *Thracia*-like species, of which the posterior end is finely keeled and truncated.

Species 121. (Mus. Cuming.)

MACTRA PLICATILIS. *Mact. testā transversim oblongā, subangustā, medio compressā, subæquilateralī, tenui, pellucido-vitreā, epidermide fuscescente indutā, undato-plicatā et subtilissimè obliquè striatā, latere antico rotundato, postico sublongiore, tennicarinato et truncato; umbonibus minutis.*

THE PLAITED MACTRA. Shell transversely oblong, rather narrow, impressed in the middle, nearly equilateral,

thin, transparent, glassy, covered with a brownish epidermis, anterior side rounded, posterior rather longer, wave-plaited and very finely obliquely striated, finely keeled and truncated; umboes very small.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Philippines.

Of a narrower transversely oblong form than the preceding species, but very similarly sculptured.

Species 122. (Mus. Cuming.)

MACTRA CANALICULATA. *Mact. testā ovatā, anticè obliquè tumidā et gibbosā, posticè compresso-rostratā, paululum hiantē, inequilateralī, latere antico multo majore, tenui, candidā, epidermide stramineā indutā, concentricè irregulariter plicato-costatā, radialim peculiariter tenuè corrugato-striatā; lunulā oblongo-cordatā; umbonibus parvis, approximalis.*

THE CHANNELLED MACTRA. Shell ovate, anteriorly obliquely swollen and gibbous, posteriorly compressly beaked, a little gaping, inequilateral, anterior side much the larger, thin, white, covered with a straw-coloured epidermis, concentrically irregularly plicately ribbed, radiately peculiarly finely wrinkle-striated; lunule oblongo-cordate; umboes small, close.

Entraria canaliculata, Say.

Macra Campechensis, Gray in Wood Ind. Test. Supp.

Hab. South Carolina.

This fine shell is what might be termed a reversed shell, the anterior side being the larger, swollen and obliquely gibbous, while the posterior is smaller and compressly beaked.

Species 123. (Mus. Cuming.)

MACTRA ANATINOIDES. *Mact. testā ovatā, inequilateralī, anticè obliquè tumidā, posticè breviter truncato, hiantē, pellucido-albā, subvitreā, concentricè irregulariter striatā et obscurè plicatā, ad margines epidermide indutā.*

THE ANATINA-LIKE MACTRA. Shell ovate, inequilateral, anteriorly obliquely swollen, posteriorly rather shortly truncated, gaping, pellucid-white, rather glassy, concentrically irregularly striated and obscurely plicated, covered with an epidermis at the margins.

Macra tenera? Deshayes (not of Gray in Wood Index Test. Supp.).

Hab. —?

A thin swollen pellucid-white shell, truncated and gaping at the posterior end, with very much the aspect of an *Anatina*.

Species 124. (Mus. Cuming.)

MACTRA PELLICULA. *Macl. testā abbreviato-oratā, inæquilaterali, anticè rotundatā et tumidā, posticè rostratā et truncatā, hiantē, tenuissimā, pellucido-albā, subradè striatā; umbonibus parvis, acutis.*

THE PELLICLE MACTRA. Shell shortly ovate, inequilateral, anteriorly rounded and swollen, posteriorly beaked and truncated, gaping, very thin, pellucid-white, rather rudely striated; umboes small, sharp.

DESHAYES, *Pro. Zool. Soc.* 1854.

Hab. Japan.

Of a thin transparent pellicle-like substance, of a shorter and more beaked form than that of the preceding species.

Species 125. (Mus. Cuming.)

MACTRA NUTTALLII. *Macl. testā oratā, plano-compressā,*

inæquilaterali, pellucido-albā, concentricè tenuissimè et striatā, striis flexuosis radiantibus minutissimè cancellatā; latere antico multo majore, supernè declivè angulato, postico coarctato, compresso-rostrato, carinato, hiantē, extremitatibus lamellato-recurreis; lunulā amplius cordatā; umbonibus parvis, acutiusculis.

NUTTALL'S MACTRA. Shell ovate, flatly compressed, inequilateral, transparent white, concentrically finely grooved and striated, very minutely cancellated with flexuous radiating striae; anterior side much the larger, angularly slanting at the upper part, posterior side contracted, compressly beaked, keeled, gaping, with the extremities lamellarly recurved; lunule largely cordate; umboes small, rather sharp.

Lutraria (Cyrtodon) Nuttallii, Conrad, *Journ. Acad. Nat. Sci. Philadelphia*, vol. vii. p. 235. pl. 18. f. 1.

Mastra recurva, Gray in Wood Index. Test. Supp.

Hab. South Carolina.

A very characteristic transparent white compressed species, peculiarly contracted on the posterior side, with the extremities lamellarly curved outwards.

M A C T R A. †

| | Plate. | Species. | | Plate. | Species. |
|---|--------|----------|--|--------|----------|
| <i>achatina</i> , <i>Chemnitz</i> | XII. | 41 | <i>Dysoni</i> , <i>Deshayes</i> | XIII. | 64 |
| <i>Adansonii</i> , <i>Philippi</i> | XI. | 49 | <i>edulis</i> , <i>King</i> | VIII. | 32 |
| <i>adspersa</i> , <i>Dunker</i> | XII. | 51 | <i>egena</i> , <i>Deshayes</i> | XIV. | 71 |
| <i>Egyptiaca</i> , <i>Chemnitz</i> | XX. | 112 | <i>elegans</i> , <i>Sowerby</i> | XVII. | 89 |
| <i>aquilaterra</i> , <i>Deshayes</i> | IV. | 14 | <i>elliptica</i> , <i>Brown</i> | XVIII. | 101 |
| <i>alata</i> , <i>Spengler</i> | VIII. | 29 | <i>elongata</i> , <i>Quoy</i> | X. | 43 |
| <i>albina</i> , <i>Deshayes</i> | III. | 12 | <i>epidermia</i> , <i>Deshayes</i> | III. | 11 |
| <i>Anatinoides</i> , <i>Reeve</i> | XXI. | 123 | <i>Euxinica</i> , <i>Krynicky</i> | XVIII. | 94 |
| <i>angulata</i> , <i>Gray</i> | IX. | 34 | <i>exalbida</i> (<i>Mulinia</i>), <i>Gray</i> | XV. | 78 |
| <i>angulifera</i> , <i>Deshayes</i> | XVI. | 83 | <i>eximia</i> , <i>Deshayes</i> | VIII. | 31 |
| <i>angusta</i> , <i>Deshayes</i> | XVIII. | 93 | <i>exoleta</i> , <i>Gray</i> | IV. | 16 |
| <i>antiquata</i> , <i>Spengler</i> | VI. | 22 | <i>explanata</i> , <i>Deshayes</i> | XIV. | 70 |
| <i>Aphrodina</i> , <i>Deshayes</i> | XIX. | 105 | <i>fasciata</i> , <i>Lamarck</i> | XII. | 52 |
| <i>apicina</i> , <i>Deshayes</i> | XIX. | 111 | <i>fragilis</i> , <i>Chemnitz</i> | XI. | 47 |
| <i>aspersa</i> , <i>Sowerby</i> | XIV. | 65 | <i>gibbosula</i> , <i>Deshayes</i> | XVI. | 79 |
| <i>attenuata</i> , <i>Deshayes</i> | XVIII. | 97 | <i>gigantea</i> , <i>Lamarck</i> | II. | 8 |
| <i>australis</i> , <i>Lamarck</i> | X. | 39 | <i>glabrata</i> , <i>Schroeter</i> | X. | 39 |
| <i>bilineata</i> , <i>C. B. Adams</i> | XV. | 72 | <i>glauca</i> , <i>Born</i> | IV. | 13 |
| <i>Brasiliana</i> , <i>Lamarck</i> | XI. | 47 | <i>helicea</i> , <i>Chemnitz</i> | IV. | 13 |
| <i>Byronensis</i> (<i>Mulinia</i>), <i>Gray</i> | XV. | 77 | <i>hians</i> , <i>Philippi</i> | VII. | 28 |
| <i>Californica</i> , <i>Deshayes</i> | XX. | 114 | <i>hepatica</i> , <i>Deshayes</i> | XIX. | 110 |
| <i>Campechensis</i> , <i>Gray</i> | XXI. | 122 | <i>inæqualis</i> , <i>Deshayes</i> | XVII. | 87 |
| <i>canaliculata</i> (<i>Lutraria</i>), <i>Say</i> | XXI. | 122 | <i>incarnata</i> , <i>Deshayes</i> | XIII. | 61 |
| <i>capillacea</i> , <i>Deshayes</i> | XX. | 117 | <i>incongrua</i> , <i>Deshayes</i> | XVIII. | 100 |
| <i>carinata</i> , <i>Lamarck</i> | VIII. | 29 | <i>inflata</i> , <i>Brown</i> | II. | 7 |
| <i>carinulata</i> , <i>Deshayes</i> | X. | 38 | <i>lactea</i> , <i>Chemnitz</i> | XI. | 50 |
| <i>Chemnitzii</i> , <i>Gray</i> | VI. | 22 | <i>lactea</i> , <i>Poli</i> | XVII. | 90 |
| <i>complanata</i> , <i>Deshayes</i> | XII. | 54 | <i>lactea</i> , <i>Potiez and Mich.</i> | IV. | 15 |
| <i>contraria</i> , <i>Deshayes</i> | XVII. | 86 | <i>lævis</i> , <i>Chemnitz</i> | VII. | 27 |
| <i>corallina</i> , <i>Linnaeus</i> | XI. | 50 | <i>Largillierii</i> , <i>Philippi</i> | VI. | 23 |
| <i>orbiculoides</i> , <i>Deshayes</i> | XVIII. | 98 | <i>lateralis</i> , <i>Say</i> | XVIII. | 99 |
| <i>Corbuloides</i> , <i>Deshayes</i> | XIX. | 103 | <i>lilacea</i> ?, <i>Lamarck</i> | XI. | 49 |
| <i>cordiformis</i> , <i>Deshayes</i> | II. | 6 | <i>lurida</i> , <i>Philippi</i> | XVIII. | 96 |
| <i>cornica</i> , <i>Deshayes</i> | XV. | 75 | <i>Luzonica</i> , <i>Deshayes</i> | XVI. | 81 |
| <i>crassatella</i> , <i>Lamarck</i> | X. | 42 | <i>maculata Chemnitz</i> | XII. | 56 |
| <i>Cumingii</i> , <i>Deshayes</i> | VI. | 24 | <i>maculata</i> , <i>Hanley</i> | XII. | 51 |
| <i>cuneata</i> , <i>Chemnitz</i> | XIX. | 109 | <i>maculosa</i> , <i>Lamarck</i> | XII. | 51 |
| <i>cyprinus</i> (<i>Lutraria</i>), <i>Gray</i> | X. | 37 | <i>maxima</i> (<i>Lutr.</i>) <i>Middendorf</i> | I. | 4 |
| <i>decora</i> , <i>Deshayes</i> | XVI. | 80 | <i>mera</i> , <i>Deshayes</i> | XVI. | 82 |
| <i>deltoides</i> , <i>Collard</i> | XVII. | 90 | <i>Meretriciformis</i> , <i>Deshayes</i> | V. | 18 |
| <i>depressa</i> , <i>Lamarck</i> | XX. | 118 | <i>mitis</i> , <i>Deshayes</i> | X. | 41 |
| <i>depressa</i> , <i>Spengler</i> | XIV. | 67 | <i>Murchisoni</i> , <i>Deshayes</i> | XV. | 76 |
| <i>discors</i> , <i>Gray</i> | V. | 17 | <i>Neapolitana</i> , <i>Poli</i> | IV. | 13 |
| <i>dissimilis</i> , <i>Deshayes</i> | XIII. | 59 | <i>nitida</i> , <i>Schroeter</i> | XI. | 46 |
| <i>dolabrata</i> , <i>Deshayes</i> | XIX. | 107 | <i>nucleus</i> , <i>Conrad</i> | XIX. | 102 |
| <i>Donaciformis</i> (<i>Mulinia</i>), <i>Gray</i> | XIII. | 62 | <i>Nuttallii</i> , (<i>Lutraria</i>) <i>Conrad</i> | XXI. | 125 |

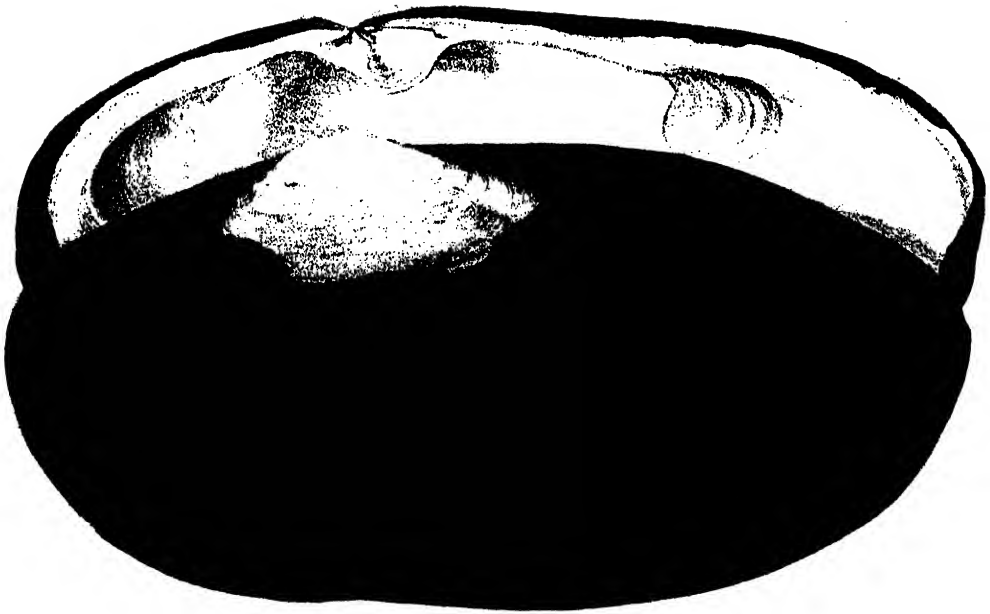
MACTRA.—INDEX.

| | Plate. | Species. | | Plate. | Species. |
|--|--------|----------|---|--------|----------|
| <i>obesa</i> , <i>Deshayes</i> | V. | 19 | <i>silicula</i> , <i>Deshayes</i> | XIX. | 108 |
| <i>oblonga</i> , <i>Say</i> | XI. | 47 | <i>Solandri</i> (<i>Spisula</i>), <i>Gray</i> | XX. | 113 |
| <i>olorina</i> , <i>Philippi</i> | IX. | 35 | <i>solida</i> , <i>Payraudeau</i> | IV. | 15 |
| <i>opposita</i> , <i>Deshayes</i> | XVIII. | 95 | <i>solidissima</i> , <i>Chemnitz</i> | II. | 8 |
| <i>ornata</i> , <i>Gray</i> | XIII. | 58 | <i>Spengleri</i> , <i>Born</i> | VII. | 27 |
| <i>ovalina</i> , <i>Lamarck</i> | XIV. | 66 | <i>Spengleri</i> , <i>Linnaeus</i> | X. | 40 |
| <i>ovalis</i> , <i>Say</i> | IX. | 36 | <i>squalida</i> , <i>Lamarck</i> | XII. | 56 |
| <i>ovata</i> (<i>Spisula</i>), <i>Gray</i> | VIII. | 30 | <i>straminea</i> , <i>Lamarck</i> | XI. | 46 |
| <i>pellicula</i> , <i>Deshayes</i> | XXI. | 124 | <i>striatella</i> , <i>Lamarck</i> | III. | 12 |
| <i>pellucidu</i> , <i>Chemnitz</i> | XX. | 118 | <i>stultorum</i> , <i>Linnaeus</i> | IV. | 15 |
| <i>plicataria</i> , <i>Linnaeus</i> | VII. | 26 | <i>sublanceolata</i> , <i>Deshayes</i> | XV. | 24 |
| <i>plicatilis</i> , <i>Deshayes</i> | XXI. | 121 | <i>subplicata</i> , <i>Lamarck</i> | VII. | 27 |
| <i>polita</i> , <i>Chemnitz</i> | X. | 39 | <i>subrostrata</i> , <i>Deshayes</i> | VII. | 25 |
| <i>ponderosa</i> , <i>Philippi</i> | IX. | 36 | <i>subtruncata</i> , <i>Donovan</i> | X. | 42 |
| <i>pulchra</i> , <i>Gray</i> | XIII. | 60 | <i>subtruncata</i> , <i>Montagu</i> | XVII. | 90 |
| <i>pura</i> , <i>Deshayes</i> | XII. | 53 | <i>sulcataria</i> , <i>Deshayes</i> | II. | 5 |
| <i>purpurea</i> , <i>Spengler</i> | XIX. | 109 | <i>symmetrica</i> , <i>Deshayes</i> | XVI. | 84 |
| <i>quadrangularis</i> , <i>Deshayes</i> | I. | 3 | <i>Thracioides</i> , <i>Ad. & Reeve</i> | XX. | 116 |
| <i>radiolata</i> , <i>Deshayes</i> | XVII. | 91 | <i>Tellioides</i> , <i>Conrad</i> | XV. | 73 |
| <i>recurva</i> , <i>Gray</i> | XXI. | 125 | <i>tenera</i> , <i>Deshayes</i> | XXI. | 123 |
| <i>Reevci</i> , <i>Deshayes</i> | XVI. | 85 | <i>transversa</i> , <i>Deshayes</i> | XVII. | 88 |
| <i>Reevesii</i> , <i>Deshayes</i> | XVII. | 92 | <i>triangula</i> , <i>Renieri</i> | XVIII. | 94 |
| <i>rostralis</i> , <i>Deshayes</i> | XXI. | 119 | <i>triangularis</i> , <i>Lamarck</i> | I. | 1 |
| <i>rostrata</i> , <i>Spengler</i> | XIX. | 104 | <i>tristis</i> , <i>Deshayes</i> | XIV. | 69 |
| <i>rotundata</i> , <i>Gmelin</i> | IV. | 15 | <i>truncata</i> , <i>Brown</i> | XVII. | 90 |
| <i>rufescens</i> , <i>Lamarck</i> | III. | 9 | <i>truncata</i> , <i>Montagu</i> | X. | 42 |
| <i>rugosa</i> , <i>Chemnitz</i> | XX. | 115 | <i>tumida</i> , <i>Chemnitz</i> | VI. | 21 |
| <i>Saulii</i> , <i>Gray</i> | XIV. | 68 | <i>turgida</i> , <i>Gmelin</i> | VI. | 21 |
| <i>Sayi</i> (<i>Spisula</i>), <i>Gray</i> | IX. | 33 | <i>typica</i> , <i>Gray</i> | XI. | 45 |
| <i>scalpellum</i> , <i>Deshayes</i> | XIX. | 106 | <i>velata</i> , <i>Philippi</i> | V. | 20 |
| <i>semistriata</i> , <i>Deshayes</i> | XII. | 55 | <i>Veneriformis</i> , <i>Deshayes</i> | I. | 2 |
| <i>semisulcata</i> , <i>Deshayes</i> | XI. | 48 | <i>violacea</i> , <i>Chemnitz</i> | XII. | 57 |
| <i>Senegalensis</i> , <i>Philippi</i> | XXI. | 120 | <i>virgo</i> , <i>Deshayes</i> | XIII. | 63 |
| <i>sericca</i> , <i>Deshayes</i> | III. | 10 | <i>vitrea</i> , <i>Gray</i> | XI. | 44 |
| <i>setosa</i> , <i>Quoy</i> | XII. | 56 | | | |

MONOGRAPH
OF THE GENUS
LUTRARIA.

"I loved to walk where none had walked before,
About the rocks that ran along the shore:
Here had I favourite stations where I stood,
And heard the murmurs of the ocean-flood."—*Crabbe*.





Genus LUTRARIA, Lamarck.

Species 2. (Mus. Cuming.)

Testa æquivalvis, inæquilateralis, oblongo-ovata, pæ compressiuscula, lateribus hians, sordidè albâ, epidermide fuscâ vel olivaceo-fuscâ plus minus indutâ. Cardio centralis, latus, dentibus duobus plano-cochleariformibus lamina trigonâ erectâ, dentibus lateralibus nullis. Impressio muscularis pallii sinu magno.

Shell equivalve, inequilateral, oblong-ovate, generally rather compressed, gaping at the sides, dirty-white, covered more or less with a brown or olive-brown epidermis. Hinge central, broad, with two flat spoon-like teeth, and an erect triangular lamina, no lateral teeth. Muscular impression of the mantle with a large sinus.

Of the miscellaneous assemblage of species described by Lamarck under this head, only two remain as true representatives of the genus, *Lutraria oblonga* and *L. elliptica*, both inhabitants of the British Seas. More than a dozen species from foreign sources have since been added of the same exact type, and we have the pleasure of illustrating them as a very natural and well-defined group. The most abnormal forms are those which have been separated by Mr. Gray under the generic title of *Zenatia*, comprising *L. acinaces*, *Deshayesii*, and *Cumingiana*; and *L. lanceolata*, which is the genus *Resania* of Mr. Gray. In the last the interior of each valve is characterized by two very prominent ledges converging from the hinge, on one of which rests the broad spoon-shaped tooth, as represented in Plate V. They are all of a smooth dull colourless hue, more or less covered with a dirty-brown or olive epidermis, and present no sculpture beyond striae or wrinkles following the lines of growth. The species are limited in number and widely distributed, being from Australia, New Zealand, Moluccas, Philippines, China, and the Cape of Good Hope. They are all natives of the Old World.

Species 1. (Mus. Cuming.)

LUTRARIA DESHAYESII. *Lutr. testâ elongato-oblongâ, tenuiculâ, subangustâ, concentricè densè striatâ, stria subrugiformibus; lateribus æqualiter rotundatis, antico prælongo, valdè hiantè; ferrugineo-carnèâ, epidermide viridi-olivaceâ indutâ.*

DESHAYES' LUTRARIA. Shell elongately oblong, thinish, rather narrow, concentrically densely striated, striae somewhat wrinkle-like; sides equally rounded, the anterior very long, much gaping; rust-flesh-tinted, covered with a greenish-olive epidermis.

Lutraria Solenoides, Deshayes (not of Lamarck).

Hab. New Zealand; Earle.

A thin delicate *Solen*-like shell, with the peculiar shelf-like tooth which serves to characterize Mr. Gray's genus *Zenatia*, conspicuously developed.

LUTRARIA ELONGATA. *Lutr. testâ elongatâ, ventricosâ, latere postico latè rotundato, antico attenuato-rotundato; concentricè irregulariter striatâ, stria medio subobsoletâ, ad latera rugiformibus; albâ, epidermide lutescente-cinereâ indutâ.*

THE ELONGATED LUTRARIA. Shell elongated, rather ventricose, posterior side broadly rounded, anterior attenuately rounded; concentrically irregularly striated, striae nearly obsolete in the middle, wrinkle-like at the sides; whitish, covered with a yellowish-ash epidermis.

GRAY, ANN. and Mag. Nat. Hist. 1837.

Hab. — ?

Chiefly distinguished by the subattenuated form of the anterior side of the shell.

Species 3. (Mus. Cuming.)

LUTRARIA ELLIPTICA. *Lutr. testâ ovato-oblongâ, subventricosâ, irregulariter concentricè striatâ, stria hic illic rugiformibus; lateribus subæqualiter rotundatis, antico longiore; incarnato-albâ, epidermide virescente-olivaceâ indutâ.*

THE ELLIPTIC LUTRARIA. Shell ovately oblong, subventricose, irregularly concentrically striated, striae here and there wrinkle-like; sides nearly equally rounded, anterior the longer; flesh-tinted white, covered with an olive-green epidermis.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 90.

Mactra lutraria, Linnæus.

Hab. Seas of Europe.

This well-known European species, compared with the rest of the genus, has a peculiar *Anodon*-like aspect.

Species 4. (Mus. Cuming.)

LUTRARIA PHILIPPINARUM. *Lutr. testâ elongato-oblongâ, ventricosâ, subobliquâ, concentricè tenuistriatâ, stria anticis rugiformibus; lateribus subattenuato-rotundatis, antico paulo rostrato, apertè hiantè; albâ, epidermide tenui cinereo-lutescente indutâ.*

THE PHILIPPINE LUTRARIA. Shell elongately oblong, ventricose, rather oblique, concentrically finely striated, anterior striae wrinkle-like; sides somewhat attenuately rounded, anterior a little beaked, openly gaping; whitish, covered with a thin ash-yellow epidermis.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Philippine Islands; Cuming.

Distinguished by its elongately oblong form and by the more attenuated roundness of the sides, the anterior of which is a little beaked and openly gaping.





LUTRARIA.

PLATE II.

Species 5. (Mus. Cuming.)

LUTRARIA CURTA. *Lutr. testā oblongo-ovatā, curvā, subobliquā, solidiusculā, ad latera latē hiantē, latere postico subattenuato-rotundato, antico abruptē truncato; concentricē rugoso-striatā, albā.*

THE SHORT LUTRARIA. Shell oblong-ovate, short, somewhat oblique, rather solid, broadly gaping at the sides, posterior side somewhat attenuately rounded, anterior abruptly truncated; concentrically roughly striated, white.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Philippine Islands.

This species has very much the aspect of an *Anatina*, being much truncated at the anterior side, and more than usually gaping.

Species 6. (Mus. Cuming.)

LUTRARIA ARCUATA. *Lutr. testā arcuato-oblongā, subobliquā; lateribus rotundatis, latē hiantibus, postico attenuatiore; concentricē tenuissimē striatā, subpellucido-albā, epidermide eximīā corneā fulvescente-cinereā indutā.*

THE ARCHED LUTRARIA. Shell arcuately oblong, rather oblique; sides rounded, widely gaping, the posterior the more attenuated; concentrically very finely striated, subtransparent white, covered with a delicate light fulvous-ash horny epidermis.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Philippine Islands.

Beautifully characterized by its elegantly arched growth and delicate texture and epidermis.

Species 7. (Mus. Cuming.)

LUTRARIA OBLONGA. *Lutr. testā elongato-oblongā, ven-*

tricosā, subarcuatā, latere postico attenuato-rotundato, antico latiore, apertē hiantē; sordidē albā, rugoso-striatā, epidermide cinereo-fuscā indutā.

THE OBLONG LUTRARIA. Shell elongately oblong, ventricose, slightly arched, posterior side attenuately rounded, anterior broader, openly gaping; dirty-white, roughly striated, covered with an ash-brown epidermis.

TURTON, Conch. Dith. Ins. Brit. p. 64. pl. 5. f. 6.

Mya oblonga, Gmelin.

Chama magna, Da Costa.

Macra hians, Dillwyn.

Lutraria Solenoides, Lamarck.

Lutricola Solenoides, De Blainville.

Hab. European Seas.

Of rough slightly arched growth, ventricose and attenuately rounded at the posterior side.

Species 8. (Mus. Cuming.)

LUTRARIA DISSIMILIS. *Lutr. testā oblongā, rectā, crassiusculā, rugosā; lateribus rotundatis, antico sublatē hiantē, postico attenuatiore; concentricē striatā, striis rugosis et irregularibus, incarnato-albā, epidermide sordidē fuscā corrugatā indutā.*

THE DISSIMILAR LUTRARIA. Shell oblong, straight, rather thick, rough; sides rounded, anterior rather widely gaping, posterior the more attenuated; concentrically striated, striae rough and irregular, flesh-white, covered with a dirty-brown shrivelled epidermis.

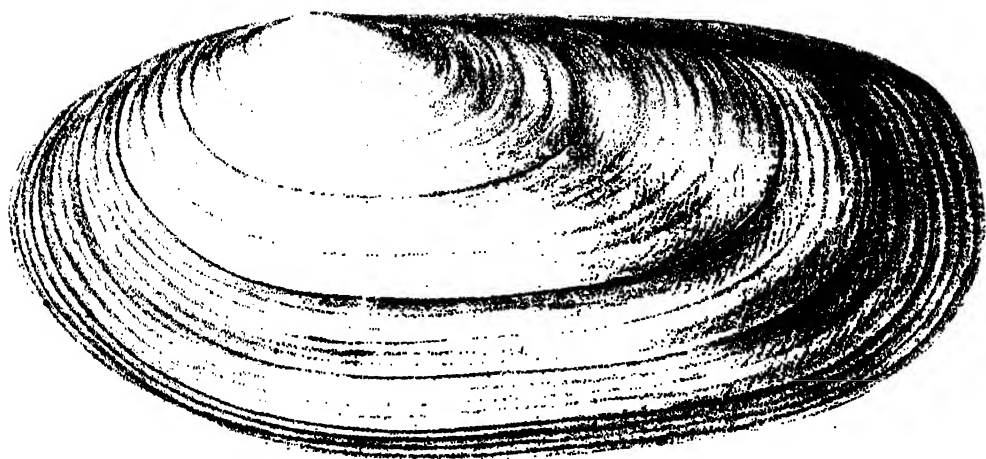
DESHAYES, Pro. Zool. Soc. 1854.

Hab. —?

A species of very distinctive character, roughly striated with a peculiarly shrivelled epidermis. Locality unknown.



9



12

LUTRARIA.

PLATE III.

Species 9. (Mus. Cuming.)

LUTRARIA CAPENSIS. *Lutr. testā oblongo-ovatā, latiusculā, compressā; lateribus subdeclivibus, subattenuato-rotundatis, latere antico radiatim indentato-impresso; concentricè striatā, striis ad latera et prope marginem subrugosis; ferrugineo-albā, epidermide sordidè fuscècente prope marginem indutā.*

THE CAPE LUTRARIA. Shell oblong-ovate, rather broad, compressed; sides slanting and attenuately rounded, anterior side radiately indently impressed; concentrically striated, striae rather rough at the sides and near the margin; rust-white, covered near the margin with a dirty light brown epidermis.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Cape of Good Hope.

Rather broader, and more slanting from the umboes to the lateral extremities, than the rest of the species, and compressed towards the margins.

Species 10. (Mus. Cuming.)

LUTRARIA IMPAR. *Lutr. testā subquadrato-elongatā, rectā, tenuiculā, convexā; lateribus aequaliter rotundatis; concentricè striatā, striis ad latera rugæformibus, posticis conspicuè corrugato-liratis, interstitiis profundis; sordidè albā.*

THE ODD LUTRARIA. Shell somewhat squarely elongated, straight, rather thin, convex; sides equally rounded, concentrically striated, striae wrinkle-like at the sides, the posterior sides conspicuously wrinkle-ridged, the interstices being deep; dead white.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Moreton Bay, Australia; Strange.

Of this very characteristic species only a dead odd valve has been collected. It is of a straight, squarely elongated,

Solenicurtus-like form, with the concentric striae peculiarly puckered on the posterior side into deep wrinkle-ridges.

Species 11. (Mus. Cuming.)

LUTRARIA ~~MACGILLI~~ ^{*largæ*}. *Lutr. testā elongato-ovalē, plano-convexā, prope umbones compressā, solidiusculā; lateribus aequaliter rotundatis, concentricè irregulariter striatā, striis ad latera rugosis; ferrugineo-albā.*

THE VERY LARGE LUTRARIA. Shell elongately ovate, flatly convex, compressed near the umboes, rather solid; sides equally rounded, irregularly concentrically striated, striae rough at the sides; rust-white.

~~LONG~~ MS. (Mus. Cuming.) *large*

Hab. China.

A fine species, of simple character, covered, doubtless, with a dark epidermis, but of which there are scarcely traces in the specimen figured.

Species 12. (Mus. Cuming.)

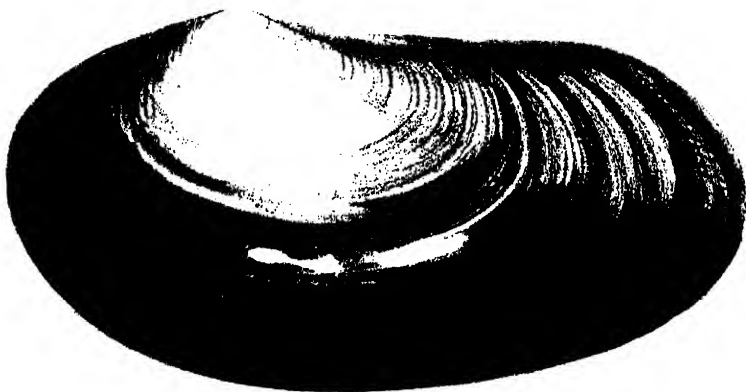
LUTRARIA AUSTRALIS. *Lutr. testā arcuato-oblongā, medio gibbosā, anticè rostratā, latere postico attenuato-rotundato, antico obliquè producto, latiore, apertè hiante; eburneā, epidermide corneā tenuè corrugatā indutā.*

THE SOUTHERN LUTRARIA. Shell arcuately oblong, gibbous in the middle, beaked anteriorly, posterior side attenuately rounded, anterior obliquely produced, broader, openly gaping; ivory-white, covered with a thin finely shrivelled horny epidermis.

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Moluccas.

A very characteristic species, peculiarly obliquely arched and gibbous, with the anterior end beaked and openly gaping.



LUTRARIA.

PLATE IV.

Species 13. (Mus. Cuming.)

LUTRARIA CUMINGIANA. *Lutr. testā elongato-oblongā, tenniculā, angustā, curvatā, Soleniformi; lateribus aequaliter rotundatis, antico valdē prolongato, subapertē hiantē, postico brevi; concentricē densē minutē striatā, pelluculo-albā, epidermide tenui cinereo-olivaceā indutā.*

CUMING'S LUTRARIA. Shell elongately oblong, rather thin, narrow, curved, Solen-shaped; sides equally rounded, the anterior very much prolonged, rather openly gaping, posterior short; concentrically thickly minutely striated, transparent white, covered with a thin ash-olive epidermis.

DESHAYES, Pro. Zool. Soc. 1854.

Zenatia Cumingiana, Gray.

Hab. New Zealand; Earl.

A delicate *Solen*-shaped species, much produced anteriorly, and openly gaping.

Species 14. (Mus. Cuming.)

LUTRARIA ACINACES. *Lutr. testā subquadrate-oblongatā, valdē compressā, lævigatā vel lineis incrementi irregulariter notatā, latere antico valdē prolongato, latiusculo, hiantē, ad umbones obsoletē angulato-carinato, ambobus aequaliter rotundatis; incarnatā, epidermide corneā nigricante-olivaceā versus marginem indutā.*

THE SCYMITAR LUTRARIA. Shell somewhat squarely elongated, very compressed, smooth or marked irregularly with the lines of growth, anterior side very much prolonged, rather broad, gaping, obsoletely angle-keeled from the umbones, both sides equally rounded; flesh-tinged, covered towards the margins with a horny blackish-olive epidermis.

QUOY, MS. (Mus. Cuming.)

Zenatia acinaces, Gray.

Hab. New Zealand; Earl.

A somewhat broad squarely elongated shell, smooth and very compressed, flesh-tinged, covered towards the margin with a very dark olive epidermis, having somewhat the aspect of a *Sanguinolaria*.

Species 15. (Mus. Cuming.)

LUTRARIA SIEBOLDTII. *Lutr. testā elongato-ovatā, curvatā; lateribus subacutē rotundatis; obliquē rugosē concentricē striatā, sordidē albā, epidermide lutescente-olivaceā indutā.*

SIEBOLDT'S LUTRARIA. Shell elongately ovate, curved; sides rather acutely rounded; obliquely roughly concentrically striated, dull white, covered with a yellowish-olive

DESHAYES, Pro. Zool. Soc. 1854.

Hab. Vancouver's Island; Kellett.

A rather solid shell, of curved concentric growth, the lines being somewhat rough and irregular, covered with a yellowish-olive epidermis.

Species 16. (Mus. Cuming.)

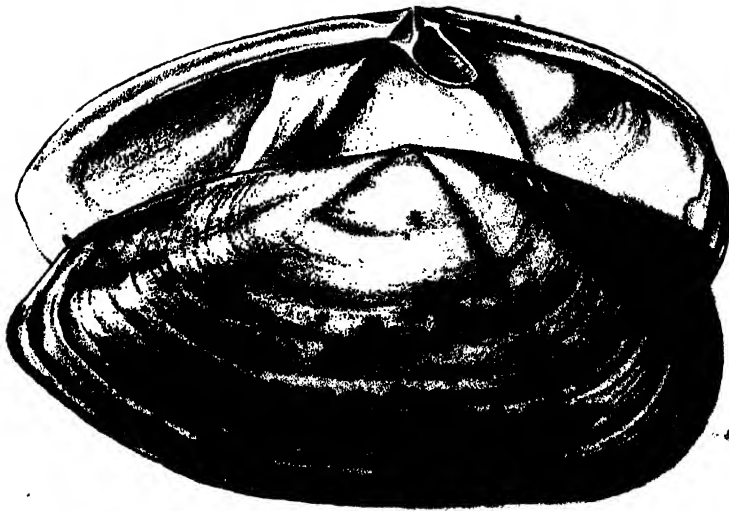
LUTRARIA RHYNCHÆNA. *Lutr. testā elongato-ovatā, subventricosā, anticē rostrato, apertē hiantē, concentricē rugoso-striatā; albidā, epidermide corneā lutescente-olivaceā indutā.*

THE BEAKED LUTRARIA. Shell elongately ovate, sub-ventricose, beaked anteriorly, openly gaping, concentrically roughly striated; whitish, covered with a yellow-olive horny epidermis.

JONAS, MS. (Mus. Cuming.)

Hab. Swan River.

Peculiarly distinguished by its ventricose growth, and by the beaked openly gaping structure of the anterior end.



LUTRARIA.

PLATE V.

Species 17. (Mus. Cuming.)

LUTRARIA LANCEOLATA. *Lut. testā oblongā, compresso-planā, anticē angulatā attenuatā, levigatā vel concentricē tenuissimē striatā, cardinis cuneo tochlogri-formi, peculiariter angulatim producto, postice angulato, sub costā internā radianti appresso; carnē, ferrugineo pallide tinctā, epidermide cornēā verrucosā, marginem indurā.*

THE LANCEOLATE LUTRARIA. Shell compressly flattened, anteriorly angularly attenuated, smooth, or very finely concentrically striated, spoon-shaped tooth of the hinge peculiarly angularly produced, inclined posteriorly, appressed upon an internal radiating rib; flesh-tinged, faintly stained with rust, covered towards the margin with a horny epidermis.

Resania lanceolata, Gray, MS. Mus. Brit.
Hab. New Zealand; Earle.

Distinguished by the spoon-shaped shelf of the hinge being angularly pressed in the posterior direction upon an internal callous rib, radiating towards the margin.

Species 18. (Mus. Cuming.)

LUTRARIA MAXIMA. *Lut. testā obliquē oblongā, ventricosā, Panopæiformi, anticē hiantē, latere postico brevi, rotundato, antico multo longiore, truncato, concentricē striatā; albidā, epidermide olivaceā cornēā deciduā indurā.*

THE VERY LARGE LUTRARIA. Shell obliquely oblong, very ventricose, Panopæa-shaped, gaping in front, posterior side short, rounded, anterior much the longer, truncated, concentrically striated; whitish, covered with an olive, horny, deciduous epidermis.

MIDDENDORF, *Malacozoologia Rossica*, vol. ii. p. 66, pl. 19, f. 1-4.

Hab. St. Juan de Fuca, Upper California.

This fine species is well distinguished from the rest of genus by its ventricose Panopæa-like form. The specimen here figured from Mr. Cuming's collection is of a more elongated form than the typical specimen represented by the Russian conchologist, but equally ventricose and truncated. In the British Museum are specimens in both states of the species.

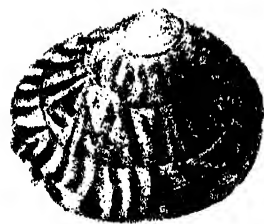
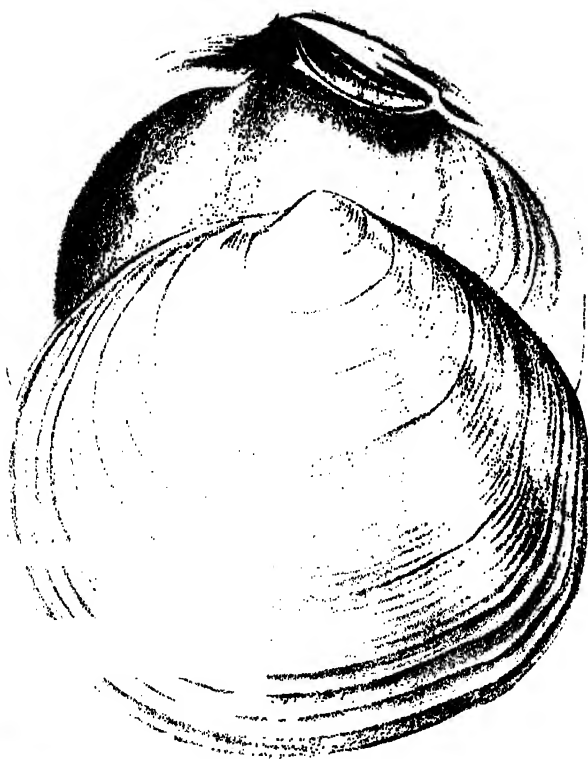
MONOGRAPH

OF THE GENUS

A M P H I D E S M A

"Whom Nature's works can charm, with God himself
Hold converse; grow familiar day by day
With His conceptions, act upon His plan,
And form to His the reliant of their souls"—*Alcibiades*.





6.



56

AMPHIDESMA.

PLATE I.

Genus AMPHIDESMA, Lamarck.

Testa æquivalvis, inæquilateralis, oblongo-ovalis vel rotundata, latere postico plerumque brevior, et plus minus flexuosa. Cardo dente unico aut duobus in utràque valvâ, foveolâ angustâ elongatâ interjacente. Ligamentum duplex, partim tenue, externum, partim crassum, in foveolâ, internum. Impressio muscularis pallii sinu magno.

Shell equivalve, inequilateral, oblong-oval or rounded, posterior side generally shorter, and more or less flexuous. Hinge composed of one or two teeth in each valve, with a narrow elongated pit lying between them. Ligament duplex, part thin, external, part thick, internal, in the pit. Muscular impression of the mantle with a large sinus.

The shells of this genus are chiefly distinguished by a peculiarity in the structure of the hinge, which encloses a strong cartilage internally, within an obliquely elongated pit on the posterior side. The genus as defined by Lamarck contained rather a miscellaneous assemblage of species. Some of these have been transferred to *Thracia*, some to *Mesodesma*, and some to *Syndosmya*; and several referred to this genus by Fleming and others have shared a similar fate. Of the Lamarckian species, *A. variegatum* (Tellina obliqua, Wood) may be regarded the type of the genus as now constituted. Mr. Cuming contributed several important new species of this form, from his researches in South America, figured by Mr. Sowerby in his 'Conchological Illustrations,' and the species since collected have enabled me to increase their number in the present monograph to upwards of fifty.

The shells are of an oblong-circular or oval form, with the posterior or cartilage side mostly the shorter, more or less truncated and flexuous. The sculpture consists chiefly of irregular concentric ridges, often in densely packed lamellæ neatly frilled, with the interstices minutely cancellated. The species have all a light and delicate aspect, though in several instances rather solid; some are white, some are painted with rose and pale yellow. There are no British species. The chief localities are Australia, the Philippine Islands, and the western coast of South and Central America.

1. (Mus. Cuming.)

AMPHIDESMA EXARATA. *Amph. testâ oblongo-ovalâ, sub-*

obliquè curvatâ, pellucente, albâ, maculis perpauca roseis pallidè adpersâ, concentricè costatâ, costis tenuibus, subrecurvis, cum interstitiis excavatis, lineis rugiformibus radiatis.

THE PLOUGHED AMPHIDESMA. Shell oblong-ovate, rather obliquely curved, pellucid, white, faintly sprinkled with a very few rose spots, concentrically ribbed, ribs thin, a little recurved, rayed, together with the deep interstices, with wrinkle-like lines.

ADAMS and REEVE, Moll. Voy. Samarang, p. 81. pl. 24. f. 9.

Hab. Sooloo Sea.

A subtransparent species, rayed with erect delicately recurved ribs, which, together with the deeply grooved interstices, are rayed with wrinkle-like lines.

Species 2. (Mus. Cuming.)

AMPHIDESMA PULCHRA. *Amph. testâ ovali, pallidâ, superficie concentricè striatâ; intus albidâ, purpureo variâ; latere postico brevior, margine anticâ inclinatâ, striis nonnullis radiantibus, strias incrementi decussantibus.*

THE BEAUTIFUL AMPHIDESMA. Shell oval, pale, surface concentrically striated; whitish within, variegated with purple; posterior side shorter, anterior margin inclined, rayed with a few striæ crossing the striæ of growth.

SOWERBY, Pro. Zool. Soc. 1832, part 2. p. 57.

Hab. Bay of Caraccas, South America.

Resembling *A. obliqua*, but of mores olid *Donax*-like growth.

Species 3. (Mus. Cuming.)

AMPHIDESMA MUSTA. *Amph. testâ oblongâ, transversâ, ventricosâ, nitidiusculâ, sordidè carnèâ, roseo obscure radiatâ, latere antico multo longiore, rotundato, postico subtruncato, ad marginem ventralem flexuoso; concentricè sulcatâ; intus purpurascens, albo limbatâ.*

THE GRACEFUL AMPHIDESMA. Shell oblong, transverse, ventricose, rather shining, dull flesh-colour, obscurely rayed with rose, anterior side much the longer, posterior slightly truncated, flexuous at the ventral margin; concentrically grooved; purple within, edged with white.

AMPHIDESMA.—PLATE I.

Semele venusta, A. Adams, Pro. Zool. Society, July, 1853.
Hab. West Columbia.

An oblong, faintly rayed, *Tellina*-like species, concentrically somewhat flexuously grooved throughout.

Species 4. (Mus. Cuming.)

AMPHIDESMA CORRUGATA. *Amph. testā suborbiculari, crassā, albicante, radiatim striatā, concentricè rugulosā; epidermide fuscā; margine dorsali posticā rectā, inclinatā; intus flavescēte-aurantiā.*

THE WRINKLED AMPHIDESMA. Shell nearly orbicular, thick, whitish, radiately striated, concentrically finely wrinkled; epidermis brown; posterior dorsal margin straight, inclined; yellowish-orange within.

SOWERBY, Pro. Zool. Soc. 1832, part 2. p. 200.

Hab. Peru and Iquiqui, South America (dredged from coarse gravel, in ten fathoms water); Cuming.

A fine large solid subdistorted shell, of an unspotted stone-white hue externally, brilliantly coloured within with yellowish-orange.

Species 5. (Fig. a, b, Mus. Cuming.)

AMPHIDESMA OBLIQUA. *Amph. testā oblongo-orbiculatā, convexo-depressā, tenui; albido-purpurascēte, maculis lituraformibus spadiceis plus minus variegatā, parte anticā et medianā liris tenuibus concentricè obliquo sculptā.*

THE VARIEGATED AMPHIDESMA. Shell oblong-orbicular,

convexly depressed, thin; white-purplish, more or less variegated with fawn blotches, anterior and middle portion of the valves sculptured with fine obliquely concentric ridges.

Tellina obliqua, Wood General Conch. p. 152. pl. 41. f. 4 and 5.

Amphidesma variegatum, Lamarck.

Hab. Brazils (in sandy mud at eight fathoms); Miller.

There is an important character in this species unnoticed by Lamarck. The anterior and middle portion of each valve is sculptured with fine concentric ridges, not ranging parallel with the lines of growth, but a little obliquely across them, well marked in Wood's figure.

Species 6. (Mus. Cuming.)

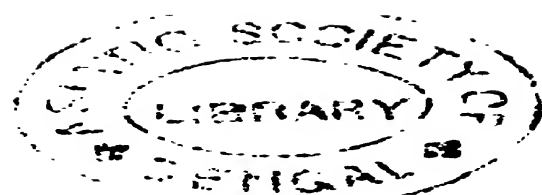
AMPHIDESMA CARNICOLOR. *Amph. testā orbiculari, latere postico subflexuoso, crassiusculā, pellucido-qbā, intus marginem versus aurantiā, concentricè liratā, liris rudibus, tenuibus, interstitiis rugis densè radiatis.*

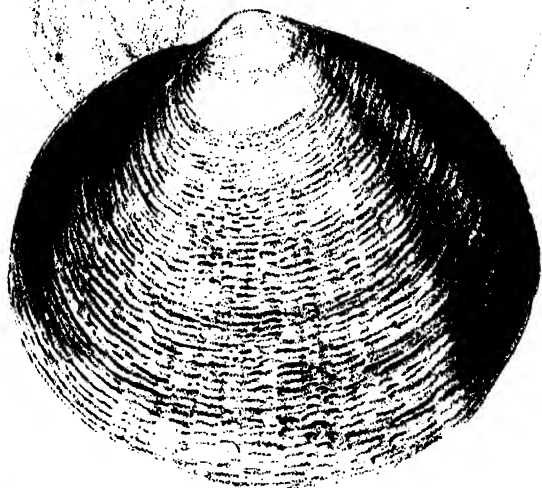
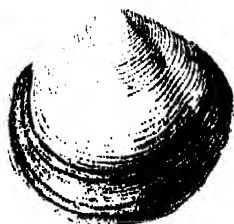
THE FLESH-COLOURED AMPHIDESMA. Shell orbicular, posterior side a little flexuous, rather thick, transparent white, orange towards the margin in the interior, concentrically ridged, ridges rude, fine, with the interstices densely rayed with wrinkles.

HANLEY, Recent Shells, Supp. pl. 12. f. 28.

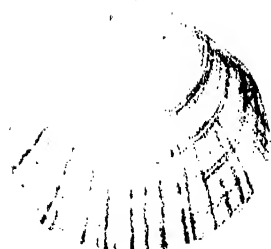
Hab. Gundulman, island of Bohol, Philippines; Cuming.

A subflexuous rounder species, sculptured with fine, short, irregular ridges, the interstices between which are closely wrinkle-rayed.

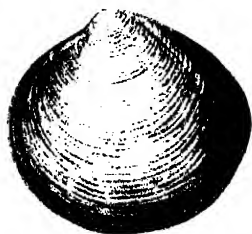




10.



11.



12.

AMPHIDESMA.

PLATE II.

Species 7. (Mus. Cuming.)

AMPHIDESMA JUKESII. *Amph. testā orbiculari, compressiusculā, albidā, concentricè lamellosā, lamellis subincrassatis, elegantè minutè crenulato-fimbriatis, ad latera productis, interstitiis tenuissimè corrugato-liratis, latere antico rotundato, postico angulato, ad marginem ventralem flexuoso; areā excavatā utrinque cardinem oblongā, subprofundā; intus luteā.*

JUKES'S AMPHIDESMA. Shell orbicular, rather compressed, whitish, concentrically lamellose, lamellæ rather thickened, elegantly minutely crenulately fimbriated, produced at the sides, interstices very finely wrinkle-edged, anterior side rounded, posterior angled, flexuous at the ventral margin; excavated area on each side of the hinge oblong and rather deep; yellowish within.

Semele Jukesii, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Torres Straits, Australia; JUKES.

Most exquisitely wrinkled-ridged and crenulated beneath the lens.

Species 8. (Mus. Cuming.)

AMPHIDESMA CRENULATA. *Amph. testā suborbiculari, convexā, subrudè incrassatā, subæquilaterali, latere postico flexuoso; sordidè albā, undique concentricè densè minutè fimbriato-lamellatā, interstitiis liris radiantibus crassissimè cancellatis.*

THE CRENULATED AMPHIDESMA. Shell somewhat orbicular, convex, somewhat rudely thickened, nearly equilateral, posterior side flexuous; dull white, concentrically densely minutely fimbriately lamellated throughout, interstices very finely cancellated with radiating ridges.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 13.

Hab. Indian Ocean.

A rudely thickened convex shell, very beautifully minutely frilled and cancellated throughout, like honey-comb.

Species 9. (Mus. Cuming.)

AMPHIDESMA RUPIMUM. *Amph. testā subovali vel suborbiculari, subirregulari, radiatim striatā, liris intus concentricè rugosā; umbone lævigato; intus dentibus lateralibus subapproximatis, brevibus, margineque dorsali posticō purpureis.*

THE ROCK AMPHIDESMA. Shell suboval or suborbicular, rather irregular, radiately striated, concentrically wrinkled with interrupted ridges; umbo smooth; white within; lateral teeth rather approximated, short, thick, and, with the posterior dorsal margin, purple.

SOWERBY, Pro. Zool. Soc. 1832, part 2. p. 199.

Hab. Lord Hood's and Galapagos Islands, Pacific Ocean (in the crevices of rocks and coral reefs); Cuming.

A *Petricola*-like species, of irregular growth, varying, doubtless, more or less, according to the nature of its habitat.

Species 10. (Mus. Cuming.)

AMPHIDESMA SOLIDA. *Amph. testā ovato-orbiculari, crassā, spadiceo-albā, intus versus cardinem purpurascēte, liris undatis rugiformibus undique concentricè sculptā.*

THE SOLID AMPHIDESMA. Shell ovately orbicular, thick, fawn-white, purple in the interior towards the hinge, concentrically sculptured throughout with waved wrinkle-like ridges.

GRAY, Spicilegium Zoologicum, part 1. p. 6. pl. 6. f. 6.

Hab. Valparaiso; Cuming.

A fine species of solid growth, sculptured externally with concentric wavy wrinkle-like ridges.

Species 11. (Mus. Cuming.)

AMPHIDESMA SUBTRUNCATA. *Amph. testā subquadrato-orbiculari, tenuiculā, subæquilaterali, latere postico truncato, flexuoso; lutescente-albā, nitente, lineis roseis subinterruptis promiscuè radiatā, plicis tenuibus obtusis flexuosis concentricè sculptā.*

THE SUB-TRUNCATED AMPHIDESMA. Shell somewhat squarely orbicular, rather thin, nearly equilateral, posterior side truncated, flexuous; yellowish-white, shining, promiscuously rayed with rose lines, and sculptured concentrically with thin obtuse flexuous folds.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 19 and 20.

Hab. Island of Nevis, West Indies (in sandy mud at the depth of six fathoms); Captain Powers.

A delicately rose-rayed *Tellina*-like species.

Species 12. (Mus. Cuming.)

AMPHIDESMA RADIATA. *Amph. testā subquadrato-orbiculari, posticè obliquè flexuosā, crassā, striis subtilibus densè radiatā, plicis tenuibus planulatis irregularibus concentricè sculptā; lutescente-albā, aurantio-carneo pallidè tinctā et radiatā.*

THE RAYED AMPHIDESMA. Shell subquadrately orbicular, posteriorly obliquely flexuous, thick, densely rayed with fine striæ, concentrically sculptured with thin flattened folds; yellowish-white, faintly tinged and rayed with orange-flesh.

RUPPEL, MSS. in Mus. Frankfort.

Hab. Red Sea (in coral sand); Ruppell.

A thick obliquely flexuous orbicular shell, tinged and rayed with orange-flesh, the surface being rayed with minute striæ across thin flattened folds, which are covered in part with a peculiar deciduous epidermis.

Species 13. (Mus. Cuming.)

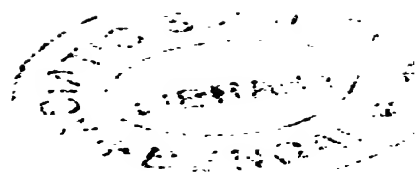
AMPHIDESMA ORBICULATA. *Amph. testā orbiculari, posticè flexuosā, latere antico paululum breviorè, umbonibus subprominulis; sordidè albā, prope marginem fusco tinctā, radiatim densè flexuoso-striatā, concentricè lineis tenuibus elenatis flavente subintertextatis sculpta.*

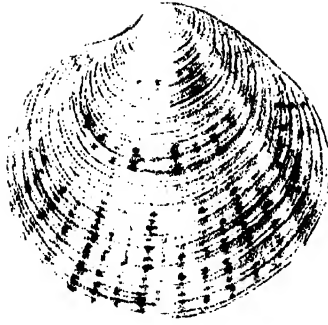
THE ORBICULAR AMPHIDESMA. Shell orbicular, posteriorly flexuous, anterior side a little the shorter, umbones rather prominent; dull white, tinged with brown near the margin, radiately densely flexuously striated, concentrically sculptured with rather interrupted thin flexuous raised lines.

SAY, Journ. Acad. Nat. Sci. Phil. vol. 2. p. 307.

Hab. United States.

A rounded *Venus*-like species of denser cancellated sculpture than the preceding.

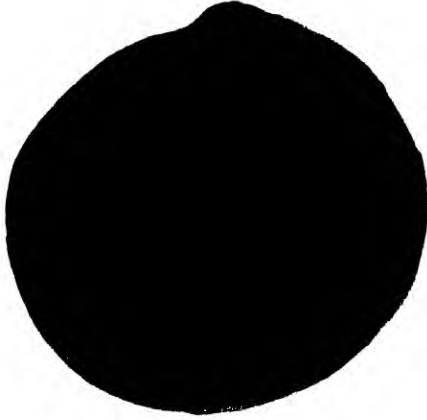




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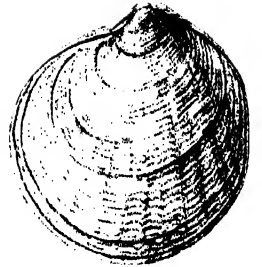
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17.



18.



19.



20.

AMPHIDESMA.

PLATE III.

Species 14. (Mus. Cuming.)

AMPHIDESMA DUPLICATA. *Amph. testâ ovali-orbiculari, compressâ, subæquilaterali, posticè flexuosâ; lutescente-albâ, luteo roseoque promiscuè punctatâ et pallidè radiatâ, concentricè subirregulariter densè duplicato-liriatâ, liris interstitiisque striis radiantibus minutè scabrosis crenulatis.*

THE DOUBLE-RIDGED AMPHIDESMA. Shell oval-orbicular, compressed, nearly equilateral, posteriorly flexuous; yellowish-white, promiscuously dotted and faintly rayed with yellow and rose, concentrically somewhat irregularly densely double-ridged, ridges and interstices crenulated with minute scabrous radiating striae.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 14 and 15.

Hab. Antigua.

An exquisitely sculptured species in which the concentric ridges are arranged in pairs, delicately and beautifully painted.

Species 15. (Mus. Cuming.)

AMPHIDESMA DECORA. *Amph. testâ orbiculari, subæquilaterali, compressiusculâ, liris concentricis et radiantibus undique eximie reticulatâ, latere antico sublongiore, rotundato, postico subtruncato, valdè flexuoso; intus albâ.*

THE GRACEFUL AMPHIDESMA. Shell orbicular, nearly equilateral, rather compressed, delicately reticulated throughout with concentric and radiating ridges, anterior side rather the longer, rounder, posterior slightly truncated, very flexuous; white within.

Semele decora, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. —?

Closely reticulated over by small delicate concentric and radiating ridges.

Species 16. (Mus. Cuming.)

AMPHIDESMA LAMELLOSA. *Amph. testâ subquadrato-ovata, subplano-compressâ, lateribus subangulatis, postico flexuoso; marmoreo-albâ, concentricè lamellato-liriatâ, liris elevatis, recurvis, externè crispato-crenulatis, ad latera productis et confertis.*

THE LAMELLOSE AMPHIDESMA. Shell somewhat squarely ovate, rather flatly compressed, sides somewhat angled,

posterior flexuous; marble-white, concentrically lamellarly ridged, ridges raised, recurved, outwardly crisply crenulated, produced and crowded at the sides.

SOWERBY, Species Conch. Part 2 (inedit.) *Amphidesma* f. 9 and 19.

Hab. Australia, Java.

The lamellar ridges which characterize this species are curled over towards the umboes, showing the outer surface to be crisply crenulated.

Species 17. (Mus. Cuming.)

AMPHIDESMA ROSEA. *Amph. testâ suborbiculari, roseâ, concentricè costatâ, epidermide fuscâ lucidâ indutâ; latere postico subemarginato; costis confertis, acutis.*

THE ROSE AMPHIDESMA. Shell nearly orbicular, rose, concentrically ribbed, covered with a brown lucid epidermis; posterior slightly emarginated; ribs close-set, sharp.

SOWERBY, Pro. Zool. Soc. 1832, part 2. p. 199.

Hab. Tumbes, Peru; Cuming.

A fine characteristic species, described originally by Mr. Sowerby from a single valve, obtained by Mr. Cuming in the above-named locality.

Species 18. (Mus. Cuming.)

AMPHIDESMA CASTA. *Amph. testâ oblongo-ovali, compressiusculâ, inæquilaterali, latere antico longiore, rotundato, postico subangulato-rotundato, flexuoso; albâ, umboibus interdum flavescentibus; radiatim striatâ, concentricè densè lamellosâ, lamellis tenuibus, pulcherrimè fimbriatis; ad latera prominentioribus.*

THE CHASTE AMPHIDESMA. Shell oblong-oval, rather compressed, inequilateral, anterior side the longer, rounded, posterior rather angularly rounded, flexuous; white, umboes sometimes yellowish; radiately striated, concentrically densely lamellated, lamellæ thin, very beautifully frilled, more prominent at the sides.

Semele casta, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Moreton Bay, Australia; Strange.

Most elegantly and beautifully sculptured, the whole of the fine lamellæ being delicately frilled at the edge.

AMPHIDESMA.—PLATE III.

Species 19. (Mus. Cuming.)

AMPHIDESMA CALIFORNICA. *Amph. testā oblongo-ovali, inæquilaterali, fuscescente-albā, sordidè fusco pallidè radiatā, concentricè sulcatā, liris intermediis obtusè elevatis subcorrugatis, sulcis creberrimè radiatim striatis; latere antico oblongo-rotundato, postico subtruncato, valdè flexuoso; intus albidā aut lutescente.*

THE CALIFORNIAN AMPHIDESMA. Shell oblong-oval, inequilateral, brownish-white, faintly rayed with dull brown, concentrically grooved, the intermediate ridges being obtusely raised and somewhat wrinkled, grooves very closely radiately striated; anterior side oblong-rounded, posterior slightly truncated, very flexuous; whitish or yellowish within.

Semele Californica, A. Adams, Zool. Pro. Soc. July, 1853.
Hab. Gulf of California.

An obtusely wrinkle-ridged species, densely rayed from the umboes with minute striæ.

Species 20. (Mus. Cuming.)

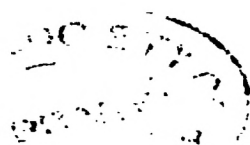
AMPHIDESMA PROXIMA. *Amph. testā suborbiculari, posticè paululum flexuosa et subtruncatā; albā, epidermide tenui sordidā plus minus deciduā, concentricè irregulariter flexuoso-liratā, striis minutis numerosis radiantibus.*

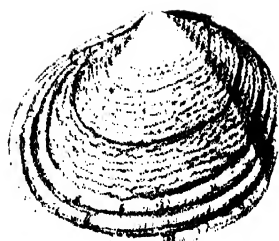
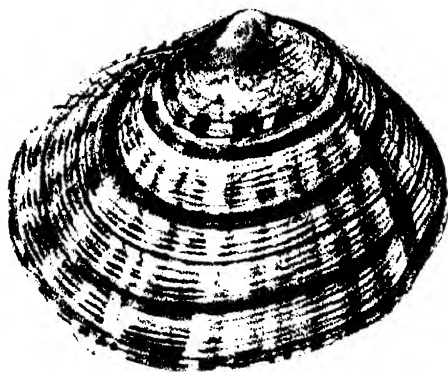
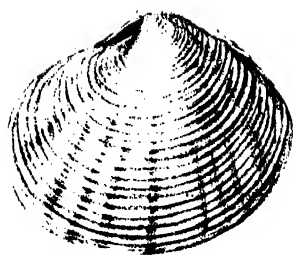
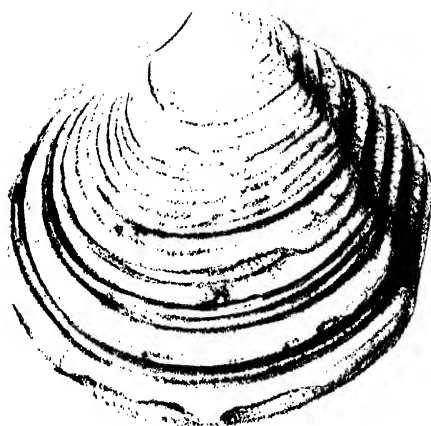
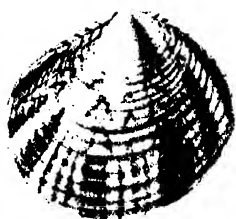
THE ALLIED AMPHIDESMA. Shell nearly orbicular, a little flexuous and slightly truncated on the posterior side; white, with a thin more or less deciduous dirty epidermis, concentrically irregularly flexuously ridged, with numerous minute radiating striæ.

C. B. ADAMS, Cat. Shells of Panama, p. 292.

Hab. Panama.

A fine large species with somewhat of a *Lucina*-aspect.





26.

AMPHIDESMA.

PLATE IV

Species 21. (Mus. Cuming.)

AMPHIDESMA GRUNERI. *Amph. testâ subobliquè ovalâ, crassâ, convexiusculâ, albidâ, roseo promiscuè maculatâ et radiatâ, latere antico vix longiore, postico rotundato, inflexuoso; concentricè plicatâ, plicis densè tenuilamellosis, lamellis quasi abradis, interstitiis liris parvis concinnè radiatis.*

GRUNER'S AMPHIDESMA. Shell somewhat oblique, ovate, thick, rather convex, whitish, promiscuously blotched and rayed with rose, anterior side scarcely the longer, posterior rounded, subflexuous; concentrically plicated, plaits densely finely lamellated; the lamellæ as though abraded, interstices finely rayed with small ridges.

Senele Gruneri, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. —?

A beautiful rose-painted species, plaited concentrically with ribs of closely packed lamellæ, the interstices between the ribs being rayed with fine ridges.

Species 22. (Mus. Cuming.)

AMPHIDESMA PALLIDA. *Amph. testâ ovali, pallidè purpurascens-fulvâ, umbonibus saturatoribus, tenuissimè concentricè striatâ, epidermide tenui subiridescente in dutâ; latere postico subtruncato, flexuoso, antico rotundato.*

THE PALE AMPHIDESMA. Shell oval, pale purple-fulvous umboes darker, very finely concentrically striated, covered with a thin subiridescent epidermis; posterior side subtruncated, flexuous, anterior rounded.

SOWERBY, Pro. Zool. Soc. 1832, p. 199.

Hab. Salango, West Columbia (dredged in sandy mud at a depth of seven fathoms); Cuming.

Extremely finely sculptured throughout with close-set concentric raised striae.

Species 23. (Mus. Cuming.)

AMPHIDESMA DECUSATA. *Amph. testâ subtrigono-orbiculari, tenuiculâ, latere postico subangulato et flexuoso, albidâ, prope umbones purpurascens tinctâ, intus purpureo vividè undato-punctatâ; radiâ minimè striatâ lineis tenuibus elevatis concentricis versus marginem.*

THE DECUSATED AMPHIDESMA. Shell somewhat tri-

angularly orbicular, rather thin, posterior side slightly angled and flexuous; whitish, tinged with purple towards the umboes, brightly wave-dotted with purple in the interior; radiately minutely striated, with thin raised concentric lines towards the margin.

Tellinâ decussata, Wood General Conch. p. 190. pl. 43. f. 2 and 3.

Amphidesma Jayanum, C. B. Adams.

Hab. West Indies; C. B. Adams.

A delicately formed species, tinged externally with purple towards the umboes, from a sprinkling of rose-purple wave-dots in the interior showing through.

Species 24. (Mus. Cuming.)

AMPHIDESMA DECISA. *Amph. testâ subtrigono-orbiculari, compressâ, latere postico subangulato et conspicuè flexuoso, concentricè peculiariter rudè plicatâ, plicis tumidis, irregularibus, undiquè crispato-punctatis, quasi corrugatis; roseo-albidâ, plicarum interstitiis hic illic roseis.*

THE DECIDED AMPHIDESMA. Shell somewhat triangularly orbicular, compressed, posterior side rather angled and conspicuously flexuous, concentrically peculiarly rudely plicated, plaits swollen, irregular, and crisply dotted, as though wrinkled, throughout; pinkish-white, interstices between the folds here and there pink.

CONRAD, Journ. Acad. Nat. Sci. Philadelphia, vol. vii. pl. 19. f. 2.

Hab. San Diego, California.

This fine and very characteristic species is most curiously wrinkle-punctured throughout.

Species 25. (Mus. Cuming.)

AMPHIDESMA ZEBUENSIS. *Amph. testâ oblongo-ovalî, in æquilaterali, compressiusculâ, latere antico sublongiore rotundato, postico subtruncato, paululum flexuoso; albidâ, carneolo promiscuè pallidè radiatâ; concentricè lamellato-costatâ, costis subæqualibus, ad latera productis, interstitiis minutissimè striato-radiatâ, lineis elevatâ concentricâ.*

THE ZEBU AMPHIDESMA. Shell oblong-oval, inequilateral, rather compressed, anterior side somewhat the longer, rounded, posterior subtruncated, a little flexuous; whitish, promiscuously raised with faint flesh-

tint; concentrically lamella-ribbed, ribs nearly equal, produced at the sides, interstices very minutely striated, with a concentric raised line.

HANLEY, Recent Shells, Supp. pl. 12. f. 7.

Semele gratiosa, A. Adams.

Hab. Moluccas.

Of an obliquely oblong-oval form, densely ribbed with recurved lamellae.

Species 26. (Mus. Cuming.)

AMPHIDESMA PUNCTATA. *Amph. testâ ovali, crassiusculâ, albicante, sparsim roseo fulvoque maculatâ; posticè subtruncatâ, plicâ flexuosâ posticali distinctâ; disco externo concentricè impresso-punctato, marginibus, inferiori costis nonnullis concentricis latis, dorsalibus utrinque roseo maculatis.*

THE DOTTED AMPHIDESMA. Shell oval, rather thick, whitish, sparingly dotted with rose and fulvous; posteriorly somewhat truncated, with a distinct posterior flexuous fold; outer disk concentrically impressly dotted, dorsal margins, the lower of which has some

broad concentric ridges, spotted at both ends with rose.

SOWERBY, Pro. Zool. Soc. 1832, p. 200.

Hab. Gallapagos Islands.

A very characteristic, rudely sculptured species, of oblong-oval compressed form, sparingly dotted with rose.

Species 27. (Mus. Cuming.)

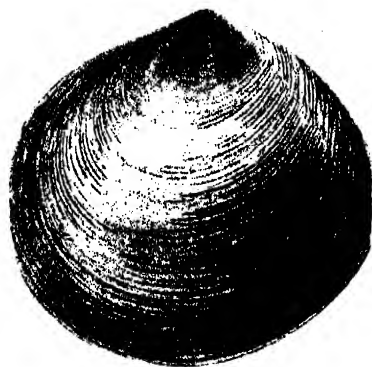
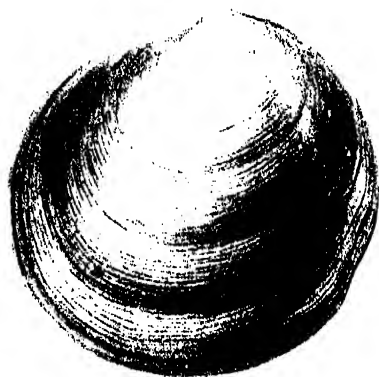
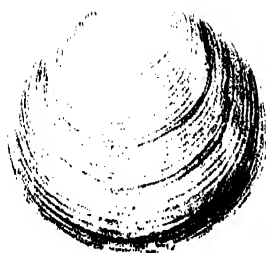
AMPHIDESMA FORMOSA. *Amph. testâ ovali, albicante, roseo radiatâ et purpureo maculatâ, concentricè costatâ, costis confertis, anticè posticèque rugulosis; umbonibus intus lutescentibus.*

THE BEAUTIFUL AMPHIDESMA. Shell oval, whitish, rayed with rose, and blotched with purple, concentrically ribbed, ribs close-set, anteriorly and posteriorly rugulose; umboes yellowish interiorly.

SOWERBY, Pro. Zool. Soc. 1832, p. 199.

Hab. St. Elena, West Columbia (dredged in seven fathoms water); Cuming.

A fine, large, richly coloured species, of *Tellina*-like aspect.



AMPHIDESMA.

PLATE V.

Species 28. (Mus. Cuming.)

AMPHIDESMA SINENSIS. *Amph. testā suboblongo-orbiculari, æquilaterali, compressiusculā, albidā, epidermide subfusca partim indutā, liris numerosis tenuibus undique dense cancellatā; latere antico rotundato, postico truncato, subflexuoso; umbonibus rosaceis, lævibus.*

THE CHINESE AMPHIDESMA. Shell rather oblong-orbicular, equilateral, rather compressed, whitish, partially covered with a light brownish epidermis, densely cancellated throughout with numerous fine ridges; anterior side rounded, posterior truncated, rather flexuous; umboes pink, smooth.

Semele Sinensis, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. China.

The concentric ridges have a thread-like appearance, while those which radiate from the vicinity of the umboes are obtuse and somewhat irregular.

Species 29. (Mus. Cuming.)

AMPHIDESMA RETICULATA. *Amph. testā orbiculari, æquilaterali, compressiusculā, lutescente-albā, liris tenuibus filiformibus concentricè sculptā, interstitiis sub lente minutè radiatim striatis; latere antico rotundato, postico truncato, subflexuoso; intus lutescente.*

THE RETICULATED AMPHIDESMA. Shell orbicular, equilateral, rather compressed, yellowish-white, sculptured with fine thread-like concentric ridges, the interstices between which are, beneath the lens, finely radiately striated; anterior side rounded, posterior truncated and slightly flexuous; interior yellow.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 11 and 12.

Hab. Brazils and West Indies (in sandy mud).

Sculptured with concentric thread-like ridges, comparatively rather distant, with the interstices very minutely radiately striated.

Species 30. (Mus. Cuming.)

AMPHIDESMA CORDIFORMIS. *Amph. testā orbiculari, crassiusculā, æquilaterali, compresso-convexā, albidā, liris tenuibus undique dense minutè decussatā, lateribus subtrigonis, postico truncato, leviter flexuoso; umbonibus rosaceis, lævibus, areis utrinque umbones lineis roseis substantibus ornatis.*

THE HEART-SHAPED AMPHIDESMA. Shell orbicular, rather thick, equilateral, compressly convex, whitish, densely minutely decussated throughout with fine ridges, sides somewhat triangular, posterior side truncated, slightly flexuous; umboes rose, smooth, areas on each side the umboes ornamented with rather distant rose lines.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 7.

Hab. Indian Ocean; Humphreys.

An extremely rare species, closely allied to *A. Sinensis*, but of a more orbicular form, rather thicker, and more finely sculptured.

Species 31. (Mus. Cuming.)

AMPHIDESMA ELLIPTICA. *Amph. testā elliptico-ovata, albā, subobliquā, lævi, epidermide sordidā; latere antico longiore, rotundato, postico obliquè subtruncato, superficie concentricè lirato-striatā, striis subtilissimis impressis radiatā.*

THE ELLIPTIC AMPHIDESMA. Shell elliptic-oval, white, rather oblique, smooth, with a dirty epidermis; anterior side the longer, rounded, posterior obliquely subtruncated, surface concentrically ridge-striated, radiately marked with very fine impressed striae.

SOWERBY, Pro. Zool. Soc. 1832, p. 200.

Hab. Monte Christe, West Columbin (in sandy mud at nine fathoms); Cuming.

A fine species, of a peculiar elliptic-oval form, simply stria-sculptured.

Species 32. (Mus. Cuming.)

AMPHIDESMA AMABILIS. *Amph. testā oblongo-ovata, compressā, albidā, concentricè lamellosā, lamellis elevatis, plicatis, margine crenulatis, ad latera productis, interstitiis striolatis, lirā filiformi concentricā sculptis; latere antico vix longiore, postico flexuoso.*

THE LOVELY AMPHIDESMA. Shell oblong-ovate, compressed, whitish, concentrically lamellose, lamellae raised, plicated, crenulated along the edge, produced at the sides, interstices finely striated, and sculptured with a concentric filiform ridge; anterior side rather the longer, posterior flexuous.

Semele amabilis, A. Adams, Pro. Zool. Soc. July, 1853.

AMPHIDESMA.—PLATE V.

Hab. Port Curtis, Australia.

Elegantly sculptured throughout with thin raised lamellæ.

Species 33. (Mus. Cuming.)

AMPHIDESMA SCABRA. *Amph. testâ orbiculari, convexâ, subæquilaterali, latere antico rotundato, postico subtruncato, leviter flexuoso; lutescente-albâ, lineis pallidâ rufo-aurantiis obscurè radiatâ, cardine purpureo-tincto; superficiei densè tenuilamellatâ, lamellis margine crenulatis, interstitiis concentricè striatis, radiatim crispato-corrugatis.*

THE ROUGH AMPHIDESMA. Shell orbicular, convex, nearly equilateral, anterior side rounded, posterior subtruncated and slightly flexuous; yellowish-white, obscurely rayed with faint reddish-orange lines, hinge purple-stained; surface densely finely lamellated, lamellæ crenulated at the edge, interstices concentrically striated, radiately crisply wrinkled.

HANLEY, Recent Shells, Supp. pl. 12.

Hab. — ?

A delicately sculptured species of yellowish-white, faintly characterized by a few radiating reddish-orange lines.

Species 34. (Mus. Cuming.)

AMPHIDESMA JOVIS. *Amph. testâ subelliptico-ovali, ventricosiusculâ, latere antico sublongiore, postico truncato, paululum flexuoso; roseo-spadiceâ, umbonibus roseis; concentricè lamellatâ, lamellis parvis, tenuibus, confertis.*

JUPITER'S AMPHIDESMA. Shell somewhat elliptically oval, rather ventricose, anterior side rather the longer, posterior truncated, a little flexuous; rose-fawn, umbones rose; concentrically lamellated, lamellæ small, thin, close-set.

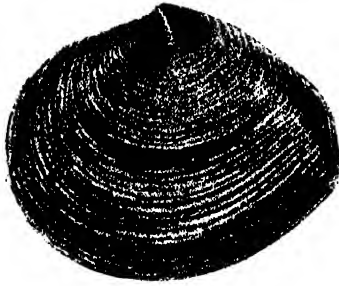
Semele Jovis, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. — ?

A fine large rose-tinted species, sculptured with close-set small lamellæ of a light fawn colour.



250



252



AMPHIDESMA.

PLATE VI.

Species 35. (Mus. Cuming.)

AMPHIDESMA MODESTA. *Amph. testā subtrigono-orbiculari, compresso-convexā, æquilaterali, concentricè dense plicatā, plicis crassiusculis, irregularibus, hic illic flexuosis, interstitiis radiatim minutissimè elevato-striatis; albida, lineis interruptis roseis obscurè radiatā.*

THE MODEST AMPHIDESMA. Shell somewhat triangularly orbicular, compressly convex, equilateral, concentrically densely plicated, plaits rather thick, irregular, here and there flexuous, interstices radiately very minutely elevately striated; whitish, obscurely rayed with interrupted rose lines.

Semele modesta, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Cape Palmas, West Africa; Redfield.

A bluntly plaited species of a peculiar *Astarte*-like form.

Species 36. (Mus. Cuming.)

Amphidesma icterica. This species is figured in the genus *Lucina* at Pl. X. fig. 60, with a remark that it partakes materially of the characters of *Amphidesma*.

Species 37. (Mus. Cuming.)

AMPHIDESMA PURPURASCENS. *Amph. testā ovali, latere antico rotundato, postico angulato, leviter flexuoso; concentricè dense acutè liratā; fulvescente, umbonibus purpurascensibus, albiradiatis, intus purpurascens.*

THE PURPLE AMPHIDESMA. Shell oval, anterior side rounded, posterior angled, slightly flexuous; concentrically densely sharply ridged; light fulvous, umbones purple, white-rayed, purple in the interior.

SOWERBY, Pro. Zool. Soc. 1832, p. 199.

Hab. St. Elena, West Columbia; Cuming.

The odd valve of this elegant species, here figured, was picked up by Mr. Cuming on the sands at the above-named locality.

Species 38. (Mus. Cuming.)

AMPHIDESMA VESTALIS. *Amph. testā orbiculari, latere postico contorto-flexuoso; albā, undique concentricè dense subtiliter striato-lamellatā, lamellis ad marginem crenulatis, interstitiis nitide radiatim cancellatis.*

THE VESTAL AMPHIDESMA. Shell orbicular, posterior side twistedly reflected; white, concentrically densely finely striately lamellated, lamellæ crenulated along the edge, interstices neatly radiately cancellated.

Semele vestalis, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. China Seas.

The lamellated and cancellated sculpture of this species is the same as that which is so characteristic of the genus, on an unusually small pattern.

Species 39. (Mus. Cuming.)

AMPHIDESMA LENTICULARIS. *Amph. testā orbiculari, tenui, subventricosa, latere postico leviter flexuoso; albā, striis filiformibus sulflexuosis concentricè sculptā, striis impressis minutissimis radiantibus decussatā.*

THE LENS-SHAPED AMPHIDESMA. Shell orbicular, thin, subventricose, posterior side slightly flexuous; white, sculptured concentrically with thread-like subflexuous striæ, decussated with very minute impressed striæ.

SOWERBY, Pro. Zool. Soc. 1832, p. 200.

Hab. St. Elena, West Columbia (in sandy mud at six fathoms); Cuming.

A thin subventricose shell, with the sculpture rather faintly developed.

Species 40. (Mus. Cuming.)

AMPHIDESMA SPONSA. *Amph. testā orbiculari, ventricosiusculā, solidā, æquilaterali, latere antico rotundato, postico subangulato, flexuoso; albā, concentricè dense lamellatā, lamellis tenuibus, acutis, margine subtilissimè crenulatis, ad latera productis, interstitiis hic illic concentricè tenuiliratis.*

THE BRIDE AMPHIDESMA. Shell orbicular, rather ventricose, solid, equilateral, anterior side rounded, posterior subangled, flexuous; white, concentrically densely lamellated, lamellæ thin, sharp, very finely crenulated along the edge, produced at the sides, interstices here and there concentrically finely ridged.

Semele sponsa, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Island of Zebu, Philippines; Cuming.

A fine solid ventricose shell of a pure white, elegantly mottled throughout.

Species 41. (Mus. Cuming.)

AMPHIDESMA AUSTRALIS. *Amph. testā orbiculari, convexā, latere postico flexuoso; albā, plus minus roseo promiscuè maculatā et radiatā, concentricè crassiplicatā, plicis subflexuosis et lineari-sulcatis.*

THE SOUTHERN AMPHIDESMA. Shell orbicular, convex, posterior side flexuous; white, more or less promiscuously spotted and rayed with rose, concentrically thickly plicated, plaits subflexuous and linearly grooved.

SOWERBY, Pro. Zool. Soc. 1832, p. 200.

Hab. New Holland; Sowerby. Lord Hood's Island, Pacific Ocean (in the crevices of coral rocks); Cuming.

Partaking of the character of *A. Gruneri*, but of a more rounded and convex form.

Species 42. (Mus. Cuming.)

AMPHIDESMA LUTEOLA. *Amph. testā orbiculari, ventricosā, subæquilaterali, latere postico leviter flexuoso; lutescente-albā, circa umbones levi, deinde liris subtilibus concentricè sculptā, interstitiis radiatim elevato-lincatis; intus luteā.*

THE YELLOWISH AMPHIDESMA. Shell orbicular, ventricose, nearly equilateral, posterior side slightly flexuous; yellowish-white, smooth around the umbones,

then concentrically sculptured with very fine ridges, interstices radiately elevately lineated; interior yellow. *Semele luteola*, A. Adams, Pro. Zool. Soc. 1853.

Hab. — ?

A rounded faintly sculptured species of a yellowish hue.

Species 43. (Mus. Cuming.)

AMPHIDESMA MARTINII. *Amph. testā subtrigono-ovalā, crassā, convexiusculā, latere antico longiore, postico subtruncato et valdè flexuoso; albidā, carneo radiatā, concentricè plicatā, plicis crassis, irregularibus, sæpe dichotomis aut confluentibus, posticè validioribus et flexuosis; intus lutescente.*

MARTIN'S AMPHIDESMA. Shell somewhat triangularly ovate, thick, rather convex, anterior side the longer, posterior somewhat truncated and very flexuous; whitish, rayed with flesh, concentrically plaited, plaits thick, irregular, often dichotomous or confluent, posteriorly stronger and flexuous; yellowish within.

Semele Martinii, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Rio.

An interesting species, distinguished by its dichotomous and solid growth, dredged in deep water off Rio by M. Adolphe Martin, a French captain, and diligent collector of shells.



47.



52.



AMPHIDESMA.

PLATE VII.

Species 44. (Mus. Cuming.)

AMPHIDESMA CANCELLATA. *Amph. testâ subobliquè ovatâ, latere antico multo longiore, carneâ, auranlio obscure radiatâ; superficie undique dense obtusè reticulato-cancellatâ.*

THE CANCELLED AMPHIDESMA. Shell rather obliquely ovate, anterior side much the longer, flesh-colour; obscurely rayed with orange; surface densely obtusely reticulately cancellated throughout.

SOWERBY, Species Conch. (inedit.) *Amphidesma*, f. 8.

Hab. — ?

An odd valve of this little bluntly cancellated species is all that is at present known.

Species 45. (Mus. Cuming.)

AMPHIDESMA LETA. *Amph. testâ ovatâ, tenuiculâ, nitente, liris tenuibus subflexuosis concentricè sculptâ, striis radianlibus minutis radiatâ, latere antico multo longiore, lateribus ambobus rotundatis; albidâ, purpurascens-roseo nitidè biradiatâ et punctatâ.*

THE CHEERFUL AMPHIDESMA. Shell ovate, rather thin, shining, sculptured concentrically with thin subflexuous ridges, and rayed with minute decussating striae, anterior side much the longer, both sides rounded; whitish, neatly two-rayed and dotted with purple-rose.

Semele leta, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. — ?

An oval shell, rounded at the ends, delicately rose-painted upon a shining white ground.

Species 46. (Mus. Cuming.)

AMPHIDESMA STRIATA. *Amph. testâ subquadrato-cuneiformi, latere antico brevissimo, postico oblongo-producto, subflexuoso, tumido; concentricè lamellatâ, lamellis subdistantibus, interstitiis concentricè striatis; subpellucido-albâ.*

THE STRIATED AMPHIDESMA. Shell somewhat squarely wedge-shaped, anterior side very short, posterior oblong-produced, subflexuous, swollen; concentrically lamellated, lamellae rather distant, interstices concentrically striated; subtransparent white.

RUPPEL, MSS. (Mus. Frankfort.)

Hab. Red Sea.

A delicate white *Petricola*-like species, differing from most species of the genus in having the posterior side of the shell longer than the anterior.

Species 47. (Mus. Cuming.)

AMPHIDESMA JUCUNDA. *Amph. testâ ovatâ, lateribus subaequalibus, rotundatis, postico vix flexuoso: compresso-convexâ, tenui, concentricè pulcherrimè lamellatis, lamellis breviter crispatis, interstitiis nitidè radiatim dense latis; pellucido-albâ, intus sanguineo maculatâ.*

THE WELCOME AMPHIDESMA. Shell ovate, with the sides nearly equal and rounded, posterior side a little flexuous; compressly convex, thin, concentrically very beautifully lamellated, lamellae shortly curled, interstices neatly radiately densely ridged; transparent white, spotted within with blood-colour.

Semele jucunda, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Singapore.

A thin, elaborately sculptured, white species, faintly blood-smearred in the interior.

Species 48. (Mus. Cuming.)

AMPHIDESMA PULCHELLA. *Amph. testâ orbiculari, convexâ, subaequilaterali, latere postico paululum flexuoso: albidâ, epidermide tenui versus marginem indutâ, umboibus purpurascens-roseis, albiradiatis, intus purpurascens-tinctâ; laevi, versus marginem concentricè tenuilatis, striis minutissimis impressis radiatâ.*

THE PRETTY AMPHIDESMA. Shell orbicular, convex, nearly equilateral, posterior side a little flexuous; whitish, covered towards the margin with a thin epidermis; umboes purple-rose, white-rayed, interior purple-tinted; smooth, concentrically thin-ridged towards the margin, and rayed with very minute impressed striae.

Semele pulchella, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. — ?

A species of simple character, purple-stained, and delicately white-rayed at the umboes, and tinged with purple interiorly.

Species 49. (Mus. Cuming.)

AMPHIDESMA VIRGINEA. *Amph. testā oblongo-ovatā, tenui, subpellucido-albā, plicis filiformibus subdistantibus concentricè sculptā, interstitiis radiatim creberrimè minutè striatis; lateribus angulato-rotundatis, postico vix flexuoso.*

THE VIRGIN AMPHIDESMA. Shell oblong-ovate, thin, subtransparent-white, sculptured concentrically with rather distant thread-like plaits, interstices radiately very closely minutely striated; sides angularly rounded, posterior side scarcely flexuous.

Semele virginea, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. Basay, Isle of Samar, Philippines; Cuming.

A semitransparent white shell, sculptured with rather distant thread-like plaits.

Species 50. (Mus. Cuming.)

AMPHIDESMA LEVIS. *Amph. testā subelliptico-ovatā, latere antico nullo longiore, postico rotundato, producto, subflexuoso, sulco ab umbone ad marginem decurrente; albā, levigatā, sub lente minutè decussatim striatā, epidermide tenuissimā nitente versus marginem indutā.*

THE SMOOTH AMPHIDESMA. Shell somewhat elliptically ovate, anterior side much the longer, posterior rounded, produced, rather flexuous, with a groove running down from the umbo to the margin; white, smooth, minutely decussately striated beneath the lens, covered towards the margin with a thin shining epidermis.

SOWERBY, Pro. Zool. Soc. 1832, p. 199.

Hab. Xipixapi, West Columbia (in sandy mud, at the depth of ten fathoms); Cuming.

A delicate smooth white species, of a peculiar sub-elliptic ovate form.

Species 51. (Mus. Cuming.)

AMPHIDESMA COMPTA. *Amph. testā orbiculari-ovatā, compressā, æquilaterali, lateribus rotundatis, postico vix flexuoso; albida, luteo-fuscescente obscure radiatā, concentricè tirato-striatā, striis minutis impressis dense radiatā.*

THE NEAT AMPHIDESMA. Shell orbicularly ovate, compressed, equilateral, sides rounded, posterior scarcely flexuous; whitish, obscurely rayed with yellowish light brown, concentrically ridge-striated, densely rayed with minute impressed striæ.

Semele compta, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. —?

Comparatively smooth in appearance, but elaborately decussately sculptured beneath the lens.

Species 52. (Mus. Cuming.)

AMPHIDESMA AMÆNA. *Amph. testā subtrigono-orbiculari, ventricosinerculā, tenellā, subæquilaterali, latere postico subproducto, paululum flexuoso; albidā, umbonibus purpurascens; concentricè flexuoso-striatā, striis minutis radiantibus.*

THE DELICATE AMPHIDESMA. Shell somewhat triangularly orbicular, rather ventricose, thin, nearly equilateral, posterior side rather produced, a little flexuous; whitish, umboes purple-tinged; concentrically flexuously striated, with minute radiating striæ.

Semele amæna, A. Adams, Pro. Zool. Soc. July, 1853.

Hab. —?

Sculptured with fine concentric ridge-like striæ, similar to the preceding species.

Species 53. (Mus. Cuming.)

AMPHIDESMA SIMPLEX. *Amph. testā oblongo-ovatā, latere postico vix brevior, concentricè dense flexuoso-striatā, striis minutissimis radiantibus decussatā; roseo-albā, umbonibus roseis.*

THE SIMPLE AMPHIDESMA. Shell oblong-oval, posterior side scarcely shorter; concentrically densely flexuously striated, decussated with very minute impressed striæ; pinkish-white, umboes pink.

ADAMS and REEVE, Zool. Voy. Samarang, Molk p. 81. pl. 24. f. 11.

Hab. China Sea.

A nearly equilateral *Tellina*-like species, tinged with pink, especially in the vicinity of the umboes.

AMPHIDESMA.

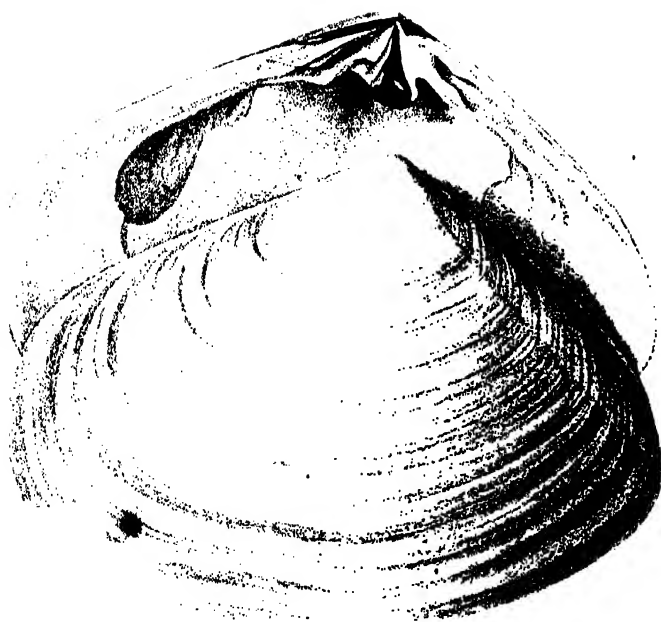
| | Species. | | Plate. | Species. | |
|---|----------|----|---|----------|----|
| amabilis (<i>Semele</i>), A. Adams . . | V. | 32 | luteola (<i>Semele</i>), A. Adams . . . | VI. | 42 |
| amana (<i>Semele</i>), A. Adams . . . | VII. | 52 | Martinii (<i>Semele</i>), A. Adams . . | VI. | 43 |
| australis, <i>Sowerby</i> | VI. | 41 | modesta (<i>Semele</i>), A. Adams . . | VI. | 35 |
| Californica (<i>Semele</i>), A. Adams. . | III. | 19 | obliqua (<i>Tellina</i>), Wood | I. | 5 |
| cancellata, <i>Sowerby</i> | VII. | 44 | orbiculata, <i>Say</i> | II. | 13 |
| carnicolor, <i>Hanley</i> | I. | 6 | pallida, <i>Sowerby</i> | IV. | 22 |
| casta (<i>Semele</i>), A. Adams | III. | 18 | proxima, C. B. Adams | III. | 20 |
| compta (<i>Semele</i>), A. Adams . . . | VII. | 51 | pulchella (<i>Semele</i>), A. Adams . . | VII | 48 |
| cordiformis (<i>Tellina</i>), Chemnitz. . | V. | 30 | pulchra, <i>Sowerby</i> | I. | 2 |
| corrugata, <i>Sowerby</i> | I. | 4 | punctata, <i>Sowerby</i> | IV. | 26 |
| crenulata, <i>Sowerby</i> | II. | 8 | purpurascens, <i>Sowerby</i> | VI. | 37 |
| decisa, <i>Conrad</i> | IV. | 24 | radiata, <i>Ruppell</i> | II. | 12 |
| decora (<i>Semele</i>), A. Adams | III. | 15 | reticulata, <i>Sowerby</i> | V. | 29 |
| decussata (<i>Tellina</i>), Wood | IV. | 23 | rosea, <i>Sowerby</i> | III. | 17 |
| duplicata, <i>Sowerby</i> | III. | 14 | rupium, <i>Sowerby</i> | II. | 9 |
| elliptica, <i>Sowerby</i> | V. | 31 | scabra, <i>Hanley</i> | V. | 33 |
| exarata, A. Ad. and Reeve | I. | 1 | simplex, A. Ad. and Reeve | VII. | 53 |
| formosa, <i>Sowerby</i> | IV. | 27 | Sincensis (<i>Semele</i>), A. Adams . . | V. | 28 |
| Gruneri (<i>Semele</i>), A. Adams . . . | IV. | 21 | solida, <i>Gray</i> | II. | 10 |
| icterica, <i>Reeve</i> | VI. | 36 | sponsa (<i>Semele</i>), A. Adams . . . | VI. | 40 |
| Jaynuni, C. B. Adams | IV. | 23 | striata, <i>Ruppell</i> | VII. | 46 |
| Jovis (<i>Semele</i>), A. Adams | V. | 34 | subtruncata, <i>Sowerby</i> | II. | 11 |
| jucunda (<i>Semele</i>), A. Adams . . . | VII. | 47 | variegatum, Lamarek | I. | 5 |
| Jukesii (<i>Semele</i>), A. Adams | II. | 7 | venusta (<i>Semele</i>), A. Adams . . . | I. | 3 |
| læta (<i>Semele</i>), A. Adams | VII. | 45 | vestalis (<i>Semele</i>), A. Adams . . . | VI. | 38 |
| lævis, <i>Sowerby</i> | VII. | 50 | virginica (<i>Semele</i>), A. Adams . . . | VII. | 49 |
| lamellosa, <i>Sowerby</i> | III. | 16 | Zebuensis, <i>Hanley</i> | IV. | |
| lenticularis, <i>Sowerby</i> | VI. | 39 | | | |

MONOGRAPH

OF THE GENUS

IV. E S O D E S M A.

“Huge Ocean shows within his yellow strand
A habitation marvellously planned
For life to occupy.” *Southey.*



MESODESMA.

PLATE I.

Genus MESODESMA, Deshayes.

Testa trigono-orata vel transversa, interdum trigono-lanceolata, plus minus compressa, æquicalcis, inæquilateralis, plerumque alba, parum colorata, parum sculpta. Carda dentibus lateralibus duobus, crassis, in utraqve valvâ, cum foveolâ profundâ cochleariformi interjacente, ligamento inserto. Impressiones musculares inæquales, anteriori majore, elongatâ; impressio pallii sine posteriori.

Shell triangularly ovate or transverse, sometimes triangularly lanceolate, more or less compressed, equivalve, inequilateral, generally white, little coloured, little sculptured. Hinge with two thick lateral teeth in each valve, with a deep spoon-shaped pit lying between, with the ligament inserted. Muscular impressions unequal, anterior the larger, elongated; impression of the mantle with a posterior sinus.

The genus *Mesodesma* was instituted by M. Deshayes for the reception of certain species of *Maclracea* having distinct peculiarities of their own, that had been assigned without consideration to different allied genera. They include *Maclra donacia*, *Crassatella polita*, *Crassatella cuenoti*, *Crassatella striata*, *Crassatella erycinæ*, *Amphidesma donacilla*, and *Amphidesma glabrælla* of Lamarck, *Mya Nova-Zelandiæ* of Chemnitz, and *Erycina complanata* of Sowerby. They are of a colourless heavy texture, and are mostly characterized by a triangular wedge form, though some are transverse and suborbicular. The hinge has not the thin triangle tooth of *Maclra*, and the ligament, unlike that of *Crassatella*, is situated in a spoon-shaped cavity alongside the cardinal teeth. The muscular impressions are unequal, the anterior being elongated, and the impression of the mantle is deeply sinuated on the posterior side.

To the ten species described by M. Deshayes in his edition of the 'Anim. sans vertèbres,' we have to add twenty-one species described chiefly by him about a twelvemonth since, in the collection of Mr. Cuming. They are intended for publication in the 'Proceedings of the Zoological Society' and in the 'Catalogue of Mollusca in the British Museum;' but as in neither of those works have the sheets containing *Mesodesma* yet issued from the press, I can only refer to M. Deshayes' manuscript tickets in the Cumingian collection, where the monograph was prepared.

The geographical distribution of the genus is very general. The most northern species are two which inhabit the

shores of Massachusetts, and one small species in the Mediterranean. New Zealand, Australia, and Van Diemen's Land contribute more than half of the species of which the localities are known. One single species, inhabiting Chili, is all that we have from South or Central America.

The most abnormal form of *Mesodesma* is *M. triquetra*, Hanley, which is Mr. Gray's genus *Anapa*.

Species 1. (Mus. Cuming.)

MESODESMA CORNEA. *Mes. testâ trigono-oblongâ, crassâ, levigatâ, lutescente-albâ, quasi pellucidâ, radiis duobus nigricantibus notatâ; lateribus rotundatis, antico brevissimo.*

THE HORNY MESODESMA. Shell triangularly oblong, thick, smooth, yellowish-white, as though transparent, marked with two blackish rays; sides rounded, anterior very short.

DESHAYES, Anim. sans vert. vol. vi. p. 133.

Amphidesma cornea, Lamarck.

Maclra cornea, Poli.

Amphidesma donacilla, Lamarck.

Donax plebeia, Montagu.

Erycina plebeia, Sowerby.

Hab. Mediterranean.

A rather solid though subtransparent-looking species, mostly rayed from the umboes with two grey-black bands.

Species 2. (Mus. Cuming.)

MESODESMA TRANSVERSA. *Mes. testâ trigono-oblongâ, compressiusculâ, subæquilateralî, antice breviorè, levigatâ, sub lente anirregulariter concentricè striatâ; pellucido-albidâ, nitente, lutescente tinctâ.*

THE TRANSVERSE MESODESMA. Shell triangularly oblong, rather compressed, nearly equilateral, anteriorly shorter, smooth, beneath the lens somewhat irregularly concentrically striated; transparent white, shining, tinged with yellow.

DESHAYES, MS. (Mus. Cuming.)

Hab. — ?

A subtransparent shining yellow-tinged species, of less solid texture than the preceding, obscurely concentrically striated.

Species 3. (Mus. Cuming.)

MESODESMA ANGUSTA. *Mes. testâ trigono-elongatâ, angustâ, compressiusculâ, valdè inæquilateralî, latere antico brevissimo, truncato; lævigatâ, nilente, epidermide olivaceo-luteâ indutâ.*

THE NARROW MESODESMA. Shell triangularly elongated, narrow, rather compressed, very inequilateral, anterior side very short, truncated; smooth, shining, covered with an olivaceous-yellow epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. —?

A very inequilateral *Donax*-shaped species, of a smooth shining aspect, much compressed towards the posterior end.

Species 4. (Mus. Cuming.)

MESODESMA LATA. *Mes. testâ trigono-ovalâ, latâ, compressâ, concentricè dense irregulariter striatâ, striis ad latera salientioribus, latere postico rotundato, antico multo breviorè, angulato-truncatâ, umbonibus subplanulatis; albidâ, epidermide corneâ, pallidè lutescente, indutâ.*

THE BROAD MESODESMA. Shell triangularly ovate, broad, compressed, concentrically densely irregularly striated, striae more grooved at the sides, posterior side rounded, anterior much shorter, angularly truncated, umboes rather flattened; whitish, covered with a pale yellow-horny epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. New Zealand.

A fine broad subcompressed species, angularly truncated down the anterior side, rounded at the posterior.

Species 5. (Mus. Cuming.)

MESODESMA ELONGATA. *Mes. testâ elongato-oblongâ, solidiusculâ, valdè inæquilateralî, latere postico compresso-producto et rotundato, antico brevissimo, truncato; albidâ, epidermide lutescente-corneâ nilente indutâ.*

THE ELONGATED MESODESMA. Shell elongately oblong, rather solid, very inequilateral, posterior side com-

pressly produced and rounded, anterior very short, truncated; whitish, covered with a shining yellowish-horny epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. Raine's Island, Torres Straits; Ince.

Of an unusually elongated form, very shortly truncated at the anterior end, compressly produced at the posterior.

Species 6. (Mus. Cuming.)

MESODESMA NITIDA. *Mes. testâ subtrigono-elongatâ, valdè inæquilateralî, latere antico brevissimo, crasso, tumidiusculo, truncato, postico compresso-producto et rotundato; nitente-albâ, epidermide lutescente-corneâ versus marginem indutâ.*

THE SHINING MESODESMA. Shell somewhat triangularly elongated, very inequilateral, anterior side very short, thick, rather swollen, truncated, posterior compressly produced and rounded; shining-white, covered towards the margin with a yellowish-horny epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. —?

Closely allied to the preceding, from which it differs in being thicker and more swollen at the posterior end.

Species 7. (Mus. Cuming.)

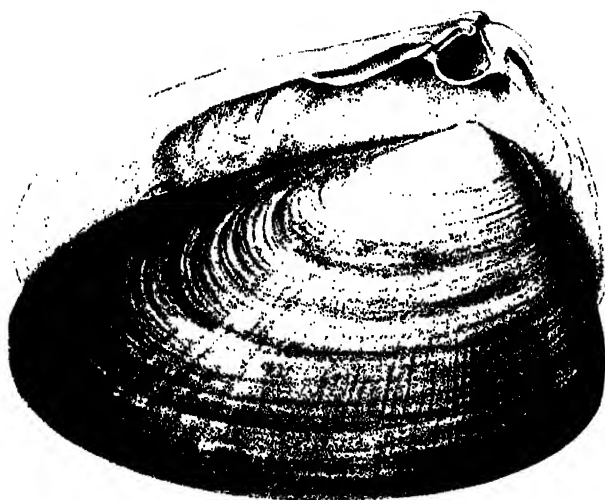
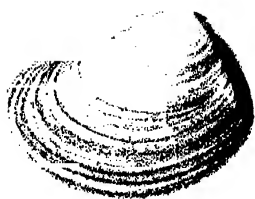
MESODESMA OVALIS. *Mes. testâ oblongo-ovalî, tenuiculâ, versus marginem compressâ, subæquilateralî, latere postico vix angustiorè; nilente-albâ, subobscurè striatâ, epidermide nigricante partim indutâ.*

THE OVAL MESODESMA. Shell oblong-oval, rather thin, compressed towards the margin, nearly equilateral, posterior side a little the narrower; shining white, rather obscurely striated, partially covered with a blackish epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. New Zealand; Hart.

Of a distinct typical form from the preceding species, rather thin and nearly equilateral, partially covered with thin black epidermis.



MESODESMA.

PLATE II.

Species 8. (Mus. Cuming.)

MESODESMA ARCTATA. *Mes. testâ subtrigono-ovata, oblique cuneatâ, convexo-compressâ, valdè inequilaterali, latere antico brevissimo, subtruncato; opaco-albâ, vix striatâ, epidermide pallidè lutescente indutâ.*

THE STRAITENED MESODESMA. Shell somewhat triangularly ovate, obliquely curved, convexly compressed, very inequilateral, anterior side very short, subtruncated; opaque-white, scarcely striated, covered with a pale yellowish epidermis.

GOULD, Invertebrata of Massachusetts, p. 57. f. 39.

Maetra arctata, Conrad.

Maetra deaurata, Conrad.

Maetra subtriangulata, Wood.

Hab. Cape Cod, Massachusetts, United States; Gould.

Of a peculiarly obliquely curved growth, very simply characterized in other respects.

Species 9. (Mus. Cuming.)

MESODESMA CUNEATA. *Mes. testâ trigonâ, subventricosa, inequilaterali, latere postico breviorè, rotundato, antico longiorè, latusculo, declivi-angulato; albâ, tenui-striatâ, epidermide vix nullâ.*

THE WEDGE-LIKE MESODESMA. Shell triangular, somewhat ventricose, inequilateral, posterior side the shorter, rounded, anterior longer, rather broad, slantingly angular; white, finely striated, with scarcely any epidermis.

DESHAYES, Anim. sans vert. vol. vi. p. 133.

Crassatella cuneata, Lamarck.

Hab. New Zealand; Hart.

Chiefly distinguished by the anterior side being the larger and longer.

Species 10. (Mus. Cuming.)

MESODESMA STRIATA. *Mes. testâ subtrigonâ, crassiusculâ, subequilateralî, latere antico subangulato, postico rotundato; albâ, subrugosè lirato-striatâ et sulcatâ, epidermide vix nullâ.*

THE STRIATED MESODESMA. Shell somewhat triangular, rather thick, nearly equilateral, anterior side slightly angled, posterior rounded; white, rather roughly ridge-like striated and grooved, scarcely any epidermis.

DESHAYES, Encyclopédie Méthodique, vers. vol. ii. p. 443.

Maetra striata, Gmelin.

Crassatella striata, Lamarck.

Erycina striata, Sowerby.

Hab.

The most coarsely ridge-like striated of the species.

Species 11. (Mus. Cuming.)

MESODESMA DONACIA. *Mes. testâ trigono-elongatâ, valdè compressâ, eadè inequilateralî, latere antico brevissimo, abruptè truncato, postico producto, compresso-attenuato; albidâ, concentricè irregulariter striatâ, striis paucis minutis radiantibus, epidermide lutescente coracè nitente indutâ.*

THE WEDGE MESODESMA. Shell triangularly elongate, very compressed, very inequilateral, anterior side very short, abruptly truncated, posterior produced, compressly attenuated; whitish, concentrically irregularly striated, with a few minute radiating striae, covered with a shining yellowish-horny epidermis.

DESHAYES, Anim. sans vert. vol. vi. p. 133.

Maetra donacia, Lamarck.

Hab. Chili; Cuming.

A fine compressed *Donax*-shaped species, covered with a beautiful shining horny epidermis.

Species 12. (Mus. Cuming.)

MESODESMA ERYCINÆA. *Mes. testâ subtrigono-ovata, latusculâ, compressâ, subequilateralî, latere antico breviorè, paululum truncato, ambobus rotundatis; opaco-albâ, leviter striatâ, epidermide olivaceo-castaneâ indutâ.*

THE ERYCINA MESODESMA. Shell somewhat triangularly ovate, rather broad, compressed, nearly equilateral, anterior side shorter, a little truncated, both sides rounded; opaque-white, slightly striated, covered with an olive-chestnut epidermis.

DESHAYES, Anim. sans vert. vol. vi. p. 134.

Crassatella erycinæa, Lamarck.

Mesodesma Diemenensis, Quoy.

Hab. Singapore.

A compressed ovate shell, with the sides nearly equal, of an opaque white substance, covered with a rich olive-chestnut epidermis.

Species 13. (Mus. Cuming.)

MESODESMA HETERODON. *Mes. testâ oblongo-ovatâ, subtrigonâ, inæquilateralî, latere antico concavo-angulato et truncato, crassiusculo, postico compresso-rotundato; albâ, levigatâ, nitente, epidermide tenui corneâ lutescente-fuscâ indutâ.*

THE IRREGULAR-TOOTHED MESODESMA. Shell oblong-ovate, subtriangular, inequilateral, anterior side concavely angled and truncated, rather thick, posterior compressly rounded; white, smooth, shining, covered with a thin yellowish brown-horny epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. North-west Australia; Dring.

A smooth shining species, covered with a yellowish-brown epidermis, concavely truncated at the posterior end.

Species 14. (Mus. Cuming.)

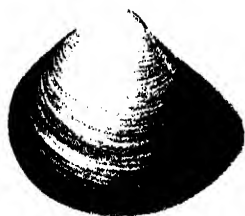
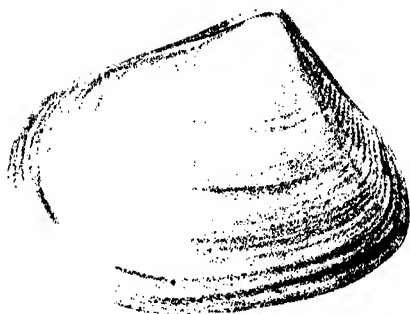
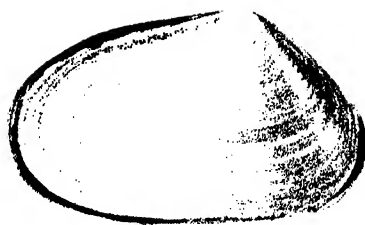
MESODESMA JAURESII. *Mes. testâ subquadrato-oblongâ, gibbosiusculâ, crassâ, inæquilateralî, latere antico obtusè curvato et truncato, postico subattenuato-rotundato; opaco-albâ, rugosissimè striatâ, epidermide luteo-olivaceâ versus marginem indutâ.*

JAURES' MESODESMA. Shell somewhat squarely oblong, rather gibbous, thick, inequilateral, anterior side obtusely curved and truncated, posterior subattenuately rounded; opake-white, very roughly striated, covered towards the margin with a yellowish-olive epidermis.

DE JOANNIS, Guerin's Mag. de Zool. 1834.

Hab. St. George's Bank, Massachusetts, United States; Gould.

Particularly characterized by its coarse opake-white roughly striated exterior.



MESODESMA.

PLATE III.

Species 15. (Mus. Cuming.)

MESODESMA MACTROIDES. *Mes. testâ elongato-oblongâ, ad umbones trigonâ, tenuiculâ, inæquilaterali, utrinque kante, latere antico declivi-rotundato, postico producto! subpellucido-albâ, nitentâ, ad latere striatâ, ad marginem epidermide fusco-nigrâ indutâ.*

THE MACTRA-LIKE MESODESMA. Shell elongately oblong, triangular at the umboes, rather thin, inequilateral, gaping at both ends, anterior side slantingly rounded, posterior produced; subtransparent-white, shining, striated at the sides, covered with a brown-black epidermis at the margin.

DESHAYES, MS. (Mus. Cuming.)

Hab. Australia.

Of a somewhat distinct typical character, of a thinnish subpellucid texture, elongately oblong in form, rounded and gaping at each end.

Species 16. (Mus. Cuming.)

MESODESMA PLANA. *Mes. testâ oblique trigono-orbiculâ, compressa-planâ, inæquilaterali, latere antico pulchra brevior; albâ, concentricè striatâ, epidermide tenui lutescente-sericeâ indutâ.*

THE FLAT MESODESMA. Shell obliquely triangularly orbicular, compressly flattened, inequilateral, anterior side a little the shorter; whitish, concentrically striated, covered with a thin yellowish silky epidermis.

HANLEY, Pro. Zool. Soc. 1843, p. 102.

Hab. Island of Ticao, Philippines; Cuming.

A convexly compressed rather solid species, having very much the appearance of an *Astarte*.

Species 17. (Mus. Cuming.)

MESODESMA INTERMEDIA. *Mes. testâ trigono-ovatâ, crassiusculâ, latere antico brevi, angulato-truncato, postico rotundato; fuscescente-albâ, subrugoso-striatâ, ad umbones lævigatâ.*

THE INTERMEDIATE MESODESMA. Shell triangularly ovate, rather thick, anterior side short, angularly truncated, posterior rounded; fuscous-white, rather roughly striated, smooth at the umboes.

DESHAYES, MS. (Mus. Cuming.)

Hab.

Of more solid growth than the preceding species, and of more regular triangular form.

Species 18. (Mus. Cuming.)

MESODESMA SPISSA. *Mes. testâ trigono-oblongâ, crassâ, anticè subacutè angulatâ et truncatâ, posticè rotundatâ, ad umbones compressâ, areâ posticâ latiusculâ, subconcaâ; fuscescente-albâ, irregulariter striatâ.*

THE MASSIVE MESODESMA. Shell triangularly oblong, thick, anteriorly rather sharply angled and truncated, posteriorly rounded, compressed at the umboes, posterior area rather broad, subconcave; light fuscous-white, irregularly striated.

Hab. New Zealand; Hart.

A rather large *Donax*-shaped species, of solid growth and of a stone-white semifossil aspect.

Species 19. (Mus. Cuming.)

MESODESMA TRIGONA. *Mes. testâ trigono-ovatâ, crassâ, gibbosâ, subæquilaterali, posticè rotundatâ, anticè subangulato-rostratâ, areâ anticâ latâ, subcordiformi; albâ, rufescente-fulco sparsim tinctâ, concentricè irregulariter liratâ et striatâ, versus umbones lævigatâ, nitentè.*

THE TRIANGULAR MESODESMA. Shell triangularly ovate, thick, gibbous, nearly equilateral, posteriorly rounded, anteriorly rather angularly beaked, anterior area broad, somewhat heart-shaped; whitish, sparingly tinged with reddish-fulvous, concentrically irregularly ridged and striated, smooth, shining towards the umboes.

DESHAYES, Ency. Méth. vers. vol. ii. p. 444.

Hab. — ?

This approaches more than any to the typical form of *Crassatella*, represented by *C. rostrata*.

Species 20. (Mus. Cuming.)

MESODESMA GLABRATA. *Mes. testâ trigono-ovatâ, compressâ, solidiusculâ, subæquilaterali, posticè rotundatâ, anticè obtusè angulatâ, areâ anticâ oblongo-cordatâ; concentricè corrugato-liratâ, ad umbones glabrâ.*

THE SMOOTH MESODESMA. Shell triangularly ovate, compressed, rather solid, nearly equilateral, poste-

MESODESMA.—PLATE III.

riorly rounded, anteriorly obtusely angled, anterior area oblong-cordate; concentrically wrinkle-ridged, smooth at the umboes.

DESHAYES, Anim. sans vert. vol. vi. p. 133.

Crassatella glabrata, Lamarck.

Hab. Australia.

The shell figured in Conch. Systematica under this name is *M. erycinæ*, a shell smooth and covered with a polished horny epidermis throughout. Lamarck characterizes his *C. glabrata* as being grooved.

Species 21. (Mus. Cuming.)

MESODESMA NOVÆ-ZELANDIÆ. *Mes. testâ oblongo-oratâ, transversâ, solidiusculâ, subæquilaterali, lateribus rotundatis, antico paululum breviorē; albidâ, irregula-*

riter striatâ, epidermide tenui corneâ fulvescente-albâ nitente indutâ.

THE NEW ZEALAND MESODESMA. Shell oblong-ovate, transverse, rather solid, nearly equilateral, sides rounded, anterior a little the shorter; whitish, irregularly striated, covered with a thin fulvous-white shining horny epidermis.

Mya Novæ-Zelandiæ, Chemnitz, Conch. Cab. vol. vi. pl. 3. f. 19, 20.

Mya australis, Gmelin.

Macla australis, Dillwyn.

Mesodesma Chemnitzii, Deshayes.

Hab. New Zealand; Earl.

Chiefly distinguished by its transverse form, which has no inclination whatever to the *Donax* form characteristic of this genus.





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MESODESMA.

PLATE IV.

Species 22. (Mus. Cuming.)

MESODESMA ANGULUS. *Mes. testā acutè obliquè oblongo-angulatā, compressā, anticè brevissimè truncatā, abruptè retusā, ad umbones subrostratā, posticè tenui-rotundatā; nitente-albā, obsolete linearis-sulcatā.*

THE ANGLE MESODESMA. Shell sharply obliquely oblong-angled, compressed, anteriorly very shortly truncated, abruptly blunted, somewhat beaked at the umbones, posteriorly thinly rounded; shining white, obsolete linearly grooved.

DESHAYES, MS. (Mus. Cuming.)

Hab. Philippine Islands.

A small, highly-polished, subtransparent white shell, remarkably abruptly shortened at the posterior end.

Species 23. (Mus. Cuming.)

MESODESMA MACRODON. *Mes. testā subtrigono-orbiculari, subequilaterali, lateribus umbonibus declivibus, deinde rotundatis, antico paulo breviorè; albidā, concentricè sulcatā et liratā, liris versus umbones obsolete.*

THE LARGE-TOOTHED MESODESMA. Shell somewhat triangularly orbicular, nearly equilateral, both sides slanting, then rounded, anterior side a little the shorter; whitish, concentrically grooved and ridged, ridges obsolete towards the umbones.

DESHAYES, MS. (Mus. Cuming.)

Hab. —?

A small, *Astarte*-shaped species, strongly but somewhat irregularly ridged towards the margin.

Species 24. (Mus. Cuming.)

MESODESMA RETUSA. *Mes. testā subquadrato-oblongā, tenuiculā, concavā, valdè inequilateralī, latere antico peculiariter brevī et truncato, postico rotundato; albidā, obliquè concentricè striatā, ad umbones carneo tinctā, versus marginem epidermide luteo-fuscā indutā.*

THE BLUNT MESODESMA. Shell somewhat squarely oblong, rather thin, concave, very inequilateral, anterior side peculiarly short and truncated, posterior rounded; whitish, obliquely concentrically striated, tinged with flesh at the umbones, covered towards the margin with a yellowish-brown epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. —?

A rather thin obliquely oblong species, peculiarly abruptly shortened on the posterior side, having somewhat the typical form of *Cypriocardia*.

Species 25. (Mus. Cuming.)

MESODESMA LANCEOLATA. *Mes. testā trigono-lanceolatā, cuneiformi, valdè inequilateralī, latere antico tumidiusculo, abruptè truncato, lato, postico lanceolato-attenuato; albidā, nitente, parvis striatā.*

THE LANCEOLATE MESODESMA. Shell triangularly lanceolate, wedge-shaped, very inequilateral, anterior side rather swollen; abruptly truncated, broad, posterior side lanceolately attenuated; whitish, shining, but little striated.

DESHAYES, MS. (Mus. Cuming.)

Hab. North-west Australia; Dring.

The most peculiarly elongated wedge form of the genus.

Species 26. (Mus. Cuming.)

MESODESMA CRASSULA. *Mes. testā obliquè trigono-orbiculari, subplanā, lateribus umbonibus declivibus, deinde rotundatis, antico breviorè; albidā, ad umbones obscure radiatā, leviter striatā, versus marginem epidermide tenui corneā nitente indutā.*

THE THICKISH MESODESMA. Shell obliquely triangularly orbicular, rather flat, both sides slanting, then rounded, anterior the shorter; whitish, obscurely rayed at the umbones, faintly striated, covered towards the margin with a thin shining horny epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. —?

Closely allied to *M. plana*, but of less solid texture.

Species 27. (Mus. Cuming.)

MESODESMA SULCATA. *Mes. testā trigono-ovata, subventricosā, equilateralī, latere antico latiorè, concentricè sulcatā et densè liratā, liris ad arcum posticam leviter elevatis; lutescente-albā.*

THE GROOVED MESODESMA. Shell triangularly ovate, rather ventricose, equilateral, anterior side the broader,

concentrically grooved and densely ridged, ridges slightly raised on the posterior area; yellowish-white.

DESHAYES, MS. (Mus. Cuming.)

Hab. — ?

An equilateral triangularly transverse species, rather densely ridged and grooved.

Species 28. (Mus. Cuming.)

MESODESMA TRIQUETRA. *Mes. testâ obliquè triangulari, crassâ, caldè gibbosâ, inaequilaterali, latere postico brevi, rotundato, antico longiore, angulato-producto, areâ latâ, concavo-cordatâ, umbonibus parvis, subdistantibus, ligamento subexterno; sordidè albâ.*

THE THREE-CORNERED MESODESMA. Shell obliquely triangular, thick, very gibbous, inequilateral, posterior side short, rounded, anterior longer, angularly produced, area broad, concavely heart-shaped, umbones small, rather distant, ligament subexternal; dead white.

HANLEY, *Proc. Zool. Soc.* 1843. p. 101.

Anapa triquetra, Gray.

Hab. Van Diemen's Land.

A gibbous *Mulinia*-like species, with an unusually large and broad anterior area, typically distinct from any other species of the genus.

Species 29. (Mus. Cuming.)

MESODESMA MITIS. *Mes. trigono-ovata, subventricosa, subaequilaterali, latere antico paulo breviorè, vix truncato; albâ, irregulariter sulcata-striatâ.*

THE MILD MESODESMA. Shell triangularly ovate, rather ventricose, nearly equilateral, anterior side a little the shorter, scarcely truncated; white, irregularly groove-striated.

DESHAYES, MS. (Mus. Cuming.)

Hab. — ?

A nearly equilateral transverse shell, of simple character.

Species 30. (Mus. Cuming.)

MESODESMA LAYARDI. *Mes. testâ trigono-ovata, subcompressâ, vix aequilaterali, latere antico obtusè triangulari, latiore; albida, pallidè violaceo-tinctâ, irregulariter striatâ, striis ad latera rugosis, intus purpurascens-violaceâ.*

LAYARD'S MESODESMA. Shell triangularly ovate, rather compressed, scarcely equilateral, anterior side obtusely triangular, broader; whitish, tinged with pale violet, irregularly striated, striae rough at the sides, interior purple-violet.

DESHAYES, MS. (Mus. Cuming.)

Hab. Ceylon; E. L. Layard.

Chiefly distinguished by its delicate purple-violet colouring.

Species 31. (Mus. Cuming.)

MESODESMA PRÆCISA. *Mes. testâ trigono-oblongâ, crassâ, gibbosiusculâ, valdè inaequilaterali, latere antico abruptè truncato, postico producto, rotundato; albida, ferrugineo-fusco tinctâ, ad marginem epidermide ferrugineo-nigricante indutâ.*

THE CHOPPED MESODESMA. Shell triangularly oblong, thick, rather gibbous, very inequilateral, anterior side abruptly truncated, posterior produced and rounded; whitish, tinged with rust-brown, covered at the margin with a rust-black epidermis.

DESHAYES, MS. (Mus. Cuming.)

Hab. Van Diemen's Land; Gunn.

A rather solid rust-stained shell, very abruptly truncated at the anterior end.

MESODESMA.

| | Plate. | Species. | | |
|---|--------|----------|---|---------|
| angulus, <i>Desh.</i> | IV. | 22 | lata, <i>Desh.</i> | I. 4 |
| angusta, <i>Desh.</i> | I. | 3 | Layardi, <i>Desh.</i> | IV. 30 |
| aretata (<i>Maetra</i>), Conrad | II. | 8 | macrodon, <i>Desh.</i> | IV. 23 |
| <i>Chemnitzii</i> , <i>Desh.</i> | III. | 21 | Mactroides, <i>Desh.</i> | III. 15 |
| cornea (<i>Maetra</i>), Poli | I. | 1 | mitis, <i>Desh.</i> | IV. 29 |
| crassula, <i>Desh.</i> | IV. | 26 | nitida, <i>Desh.</i> | I. 6 |
| cuneata (<i>Crassatella</i>), Lam. | II. | 9 | Novæ-Zelandiæ (<i>Mya</i>), Chem. | III. 21 |
| <i>Diemenensis</i> , Quoy | II. | 12 | ovalis, <i>Desh.</i> | I. 7 |
| donacia (<i>Maetra</i>), Lam. | II. | 11 | plana, <i>Hanley</i> | III. 16 |
| <i>donacilla</i> , <i>Desh.</i> | I. | 1 | præcisa, <i>Desh.</i> | IV. 31 |
| elongata, <i>Desh.</i> | I. | 5 | retusa, <i>Desh.</i> | IV. 24 |
| erycinæa (<i>Crassatella</i>), Lam. | II. | 12 | spissa, <i>Reeve.</i> | III. 18 |
| glabrata (<i>Crassatella</i>), Lam. | III. | 20 | striata (<i>Maetra</i>), Gmelin | II. 10 |
| heterodon, <i>Desh.</i> | II. | 13 | sulcata, <i>Desh.</i> | IV. 27 |
| intermedia, <i>Desh.</i> | III. | 17 | transversa, <i>Desh.</i> | I. 2 |
| Jauresii, <i>De Joannis.</i> | II. | 14 | trigona, <i>Desh.</i> | III. 19 |
| lanceolata, <i>Desh.</i> | IV. | 25 | triquetra, <i>Hanley</i> | IV. 28 |

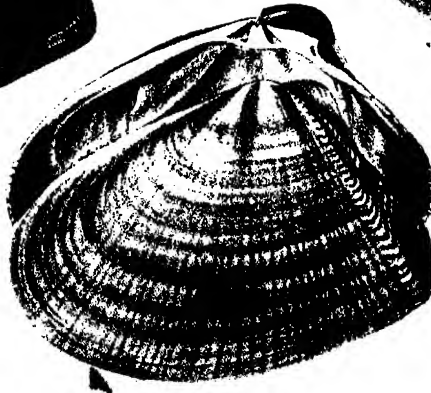
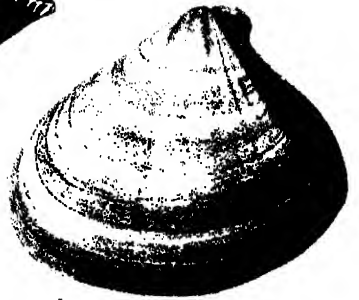
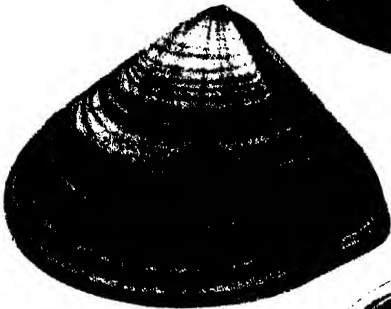
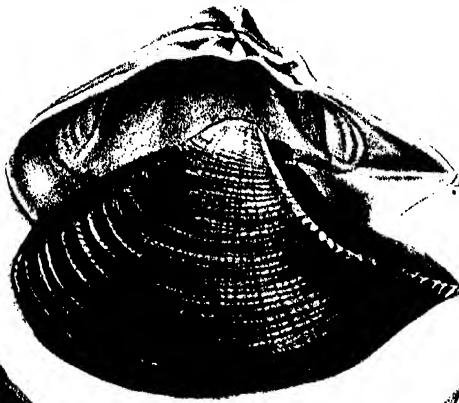
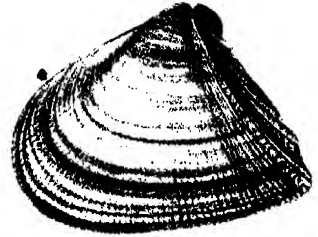
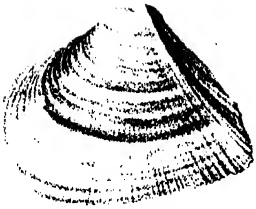
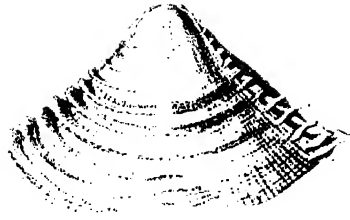
MONOGRAPH

OF THE GENUS

D O N A X .

"Slime the material, but the slime was turned
To adamant by their petrific touch :
Frail were their frames, ephemeral their lives,
Their masonry imperishable." -- *Montgomery*.





DONAX.

PLATE I.

Genus DONAX, Linnæus.

Testa trigono-ovata vel oblonga, plus minus cuneata, interdum flexuosa, æquivalvis, plerumque valde inequilateralis, latere postico sæpius abruptè truncato, interdum lævigata, plerumque radiatim lineari-sulcata. Dentes cardinales alterius valvæ duo, alterius unus, superius bifidus; dentes laterales duo vel unus, plus minus remoti. Ligamentum externum, breve, plerumque bipartitum, partim post umboes positum. Impressio muscularis pallii sinu magno.

Shell triangularly ovate or oblong, more or less wedge-shaped, sometimes flexuous, equivalve, generally very inequilateral, the posterior side being often very abruptly truncated, sometimes smooth, generally radiately linearly grooved. Two cardinal teeth in one valve, and one in the other, bifid at the upper part; two or one lateral teeth, more or less distant. Ligament external, short, generally bipartite, partially placed behind the umboes. Muscular impression of the mantle with a large sinus.

There is scarcely any assemblage of bivalves so distinct in generic character as those which have been associated, without change, from the time of Linnæus, under the head of *Donax*. They are distinguished by little variation either in form, sculpture, or colouring. In form they are typically of a triangular wedge-shape, the anterior side being long and rounded, the posterior very short and abruptly truncated. In sculpture they are, with few exceptions, either plain, or, more generally, radiately linearly grooved. In colour they are mostly of a uniform-fulvous or dull grey, frequently, however, tinted with rays. They have neither the variety of contour nor the spines and laminae, unless excepting the *D. scortum*, which characterize the Venus and Cockle tribes, nor do they excite the attention of connoisseurs by much variety or brilliancy of colour.

Of the species contained in the following monograph, from sixty to seventy in number, more than half have not yet been figured. The conchologists who have paid most attention to this genus in the present day, are M. Deshayes and Mr. Hanley; a few species have also been described by M. Philippi and Dr. Gray. The habitats of the *Donaxes* are in almost all temperate and tropical seas; so miscellaneous indeed are they, that their geographical distribution presents no special features for observation.

Species 1. (Fig. 1 and 3, Mus. Cuming.)

DONAX SCORTUM. *Don. testâ trigono-oblongâ, gibbosâ, umboibus angulato-approximatis, subcentralibus, concentricè subirregulariter densè lamellosâ, striis subtilibus radiantibus decussatis; lamellis anticis erectis, fimbriatis, interstitiis clathratis, posticis tenuioribus numerosis, ad angulum plus minus squamato-spinosis; sordide albâ, intus violaceâ; latere antico subangulato, lunulâ oblongâ, postico acutissimè angulato, latissimè concavo-truncato.*

THE HIDE DONAX. Shell triangularly oblong, gibbous, umboes angularly approximated, nearly central; concentrically somewhat irregularly densely lamellose, decussated with radiating striæ, anterior lamellæ erect, fimbriated, interstices latticed, posterior lamellæ thinner and more numerous, more or less squamately spinose on the angle; dirty white, violet in the interior; anterior side slightly angled, with an oblong lunule, posterior very sharply angled, very broadly concavely truncated.

LINNÆUS, Nat. (12th edit.) p. 1126.

Testa juvenis. *Donax pubescens*, Linnæus.

HAB. Cape of Good Hope.

There can be little doubt but that the Linnæan *D. pubescens*, represented at Fig. 1, is the young of the well-known adult *D. scortum*, Fig. 3.

Species 2. (Mus. Cuming.)

DONAX DENTIFERA. *Don. testâ trigono-ovalâ, latiusculâ, compressâ, anticè rotundatâ, posticè acutè crenulatâ et plano-truncatâ, areâ densè granulato-striatâ, versus marginem bidenticulatâ; sordide cinereâ vel fulvâ, cente, radiatim tenui-sulcatâ, liris posticis*

THE TOOTHED DONAX. Shell triangularly ovate, rather broad, compressed, anteriorly rounded, posteriorly sharply angled and flatly truncated, with the area densely crenulately striated, towards the margin double-denticulated; dull ash or fulvous, radiately finely grooved, the posterior ridges crenulated.

HANLEY, Pro. Zool. Soc. 1843, p. 6.

HAB. Panama.

An extremely characteristic species, chiefly remarkable two pairs of interlocking teeth at the ventral posterior shell.

Species 4. (Fig. a, b, Mus. Cuming.)

DONAX DELTOIDES. *Don. testā trigono-ovata, solidiusculā, compressā, radiatim subtilissimè striatā, lævigatā, politā, purpurascente-fuscā vel fulvā, umbonibus interdum violaceis, latere antico rotundato, postico obtusè truncato, arcu convexā.*

THE DELTOID DONAX. Shell triangularly ovate, rather solid, compressed, radiately very finely striated, smooth, polished, purplish-brown, or fulvous, umboes sometimes violet, anterior side rounded, posterior obtusely truncated, area convex.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 241.

Hab. Brisbane, East Coast of New Holland; Strange.

The *D. epidermia* of Lamarck is probably a variety of this species.

Species 5. (Mus. Cuming.)

DONAX SERRA. *Don. testā oblongo-cuneatā, solidiusculā,*

compressā, lævigatā, sub lente radiatim striatā, prope angulum posticum sulcatā, pallide spadiceā, ad umbones violaceo-radiatā; latere antico subacuminato-rotundato, postico obtusè angulato, undato-corrugato, ad extremitatem hiantem.

THE SAW DONAX. Shell oblong wedge-shaped, rather solid, compressed, smooth, beneath the lens radiately striated, near the posterior angle grooved; light fawn, violet-rayed at the umboes; anterior side subacuminately rounded, posterior obtusely angled, wave-wrinkled, gaping at the extremity.

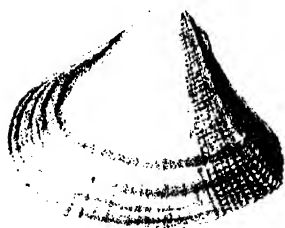
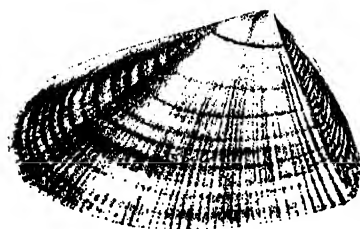
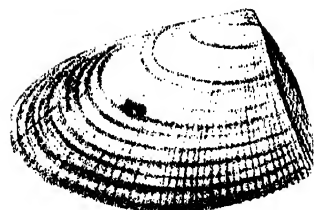
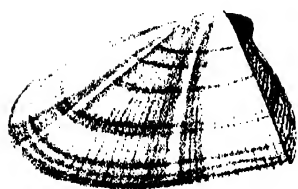
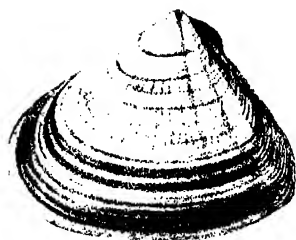
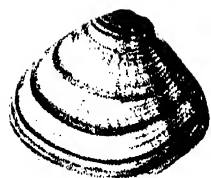
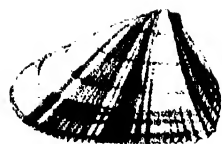
CHEMNITZ, Conch. Cab. vol. vi. p. 257. pl. 25. f. 251, 252.

Donax ringens, Lamarck.

Capra ringens, Deshayes.

Hab. Cape of Good Hope.

Distinguished by its ample oblong-compressed form and conspicuous wave-wrinkled posterior area.



DONAX.

PLATE II.

Species 6. (Mus. Cuming.)

DONAX HANLEYANA. *Don. testâ trigono-cuneatâ, radiatim lineari-sulcatâ, cinerascens-albâ, purpurascens-roseo latiradiatâ, valdè inæquilaterali, posticè gibbosâ, abruptè truncatâ, anticè acuminato-coarctatâ et paululum hians; areâ posticâ convexâ, concentricè granulatâ, utrinque tenuicarinatâ.*

HANLEY'S DONAX. Shell triangularly wedge-shaped, radiately linearly grooved, pale ash-white, broadly rayed with purplish-rose, very inequilateral, posteriorly gibbous, abruptly truncated, anteriorly acuminately contracted and a little gaping; posterior area convex, concentrically granulated, finely keeled on each side.

PHILIPPI, MS. (Mus. Cuming.)

Hab. Rio Janeiro.

Chiefly distinguished by the acuminate and pinched growth of the anterior end, whilst the posterior is full and granulated.

Species 7. (Fig. a, b, Mus. Cuming.)

DONAX TRIFASCIATA. *Don. testâ subtrigono-ovalâ, latiusculâ, compressâ, tenuissimè radiatim striatâ; albidâ, roseo trifasciatâ, vel cinerâ, plumbeo-tinctâ; lateribus declivi-rotundatis, postico vix truncato, obtusè angulato, crispato-corrugato.*

THE THREE-BANDED DONAX. Shell somewhat triangularly ovate, rather broad, compressed; very finely radiately striated; whitish, three-banded with rose, or ash-colour, lead-stained; sides slantingly rounded, posterior side scarcely truncated, obtusely angled, crispately wrinkled.

Hab. Philippine Islands.

A compressly ovate species, variously coloured, with the posterior side delicately crisply wrinkled and little truncated.

Species 8. (Mus. Cuming.)

DONAX COMPRESSA. *Don. testâ trigono-cuneiformi, compressissimâ, posticè latâ, obtusè angulatâ, anticè rotundatâ, radiatim minutissimè densè striatâ; areâ posticâ minutissimè crispato-corrugatâ; griseo-cinerâ, lineis obscurè venosâ, ad umbones violaceo triradiatâ.*

THE COMPRESSED DONAX. Shell triangularly wedge-

shaped, very compressed, posteriorly broad, obtusely angled, anteriorly rounded, radiately very minutely densely striated; posterior area very minutely crispately wrinkled; greyish-ash, obscurely veined with lines, three-rayed with violet at the umboes.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 240.
Hab. Sumatra.

Peculiarly compressed from the posterior side, which is broad and obtusely angled.

Species 9. (Mus. Cuming.)

DONAX RUGOSA. *Don. testâ elongato-oblongâ, solidiusculâ, densè radiatim sulcatâ; cinereo-spadiceâ, interdum albifasciatâ, vel miniatò tinctâ; valdè inæquilaterali, latere postico abruptissimè truncato, ad angulum carinato; areâ concentricè undato-corrugatâ, latere antico acuminato-rotundato.*

THE ROUGH DONAX. Shell elongately oblong, rather solid, densely radiately grooved; ash-fawn, sometimes white-banded, or scarlet-tinged, very inequilateral, posterior side very abruptly truncated, keeled at the angle; area concentrically wave-wrinkled, anterior side acuminately rounded.

LINNÆUS, Syst. Nat. (12th edit.) p. 1127.

Hab. Gold Coast, West Africa.

Distinguished by its narrow oblong-conical form and wave-wrinkled posterior area.

Species 10. (Mus. Cuming.)

DONAX ASSIMILIS. *Don. testâ rotundato-oblongâ, medio subcontractâ, sordidè cinerâ, ad marginem plumbeo-fasciatâ, ad umbones violaceo radiatâ, radiatim densè lineari-sulcatâ, posticè granoso-decussatâ, latere antico rotundato, postico concavo-truncato.*

THE SIMILAR DONAX. Shell rotundately oblong, subcontracted in the middle, dull ash-colour, lead-banded at the margin, violet-rayed at the umboes, radiately densely linearly grooved, posteriorly granosely decussated, anterior side rounded, posterior concavely truncated.

HANLEY, MS. (Mus. Cuming.)

Hab. Panama.

A dull obese shell, densely grained about the posterior area.

Species 11. (Mus. Cuming.)

DONAX CARINATA. *Don. testā elongato-cuneiformi, gibbosā, anticē acuminatā, posticē concavo-truncatā, lateribus ab umbonibus subcentralibus declivibus; funeocastaneā, ad umboes violaceā; levigatā, politā, versus marginem densē lineari-sulcatā.*

THE KEELED DONAX. Shell elongately wedge-shaped, gibbous, anteriorly acuminate, posteriorly concavely truncated, sides slanting from the umboes, which are nearly central; smoky-chestnut, violet at the umboes; smooth, polished, towards the margin densely linearly grooved.

HANLEY, Pro. Zool. Soc. 1843, p. 5.

Hab. San Blas, California.

Distinguished by its equisilanting elongately wedge-shaped form, and polished chestnut colouring.

Species 12. (Mus. Cuming.)

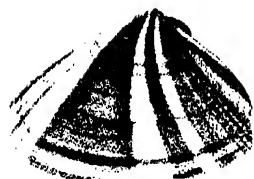
DONAX ASPER. *Don. testā trigono-cuneatā, medio latā et gibbosulā, ad umboes rostratā et elevato-contractā, cinerascēte-gibbā, subopacā, radiatim densē liratā, ad latus posticum et ad aream densē corrugato-crenatā, latere antico subacuminato-rotundato, postico latē concavo-truncato.*

THE ROUGH DONAX. Shell triangularly wedge-shaped, broad and rather gibbous in the middle, beaked, elevatedly contracted at the umboes, ash-white, rather opaque, radiately densely grooved, at the posterior side and area densely corrugately crenated, anterior side rather acuminate rounded, posterior broadly concavely truncated.

HANLEY, MS. (Mus. Cuming.)

Hab. Tumbes, Peru; Cuming.

A very characteristic species, elevatedly beaked as it were about the umboes, and very concavely truncated on the posterior side, whilst the whole of the posterior half of the shell is densely wrinkle-crenated.



DONAX.

PLATE III.

Species 13. (Mus. Cuming.)

DONAX TICAOONICA. *Don. testâ trigono-ovatâ, ad umbones acutè angulato-productâ, deinde compressâ, levigatâ, nitente, ad aream posticam crispato-striatâ, albidâ aut fulvo-castaneâ, epidermide corneâ interdum indutâ, latere postico brevissimè truncato, antico acuminato-rotundato.*

THE TICAO DONAX. Shell triangularly ovate, sharply angled and produced at the umbones, then compressed, smooth, shining, crisply striated on the posterior area, whitish or fulvous-chestnut, sometimes covered with a horny epidermis, posterior side very shortly truncated, anterior acuminate rounded.

HANLEY, MS. (Mus. Cuming.)

Hab. Island of Ticao, Philippines; Cuming.

Chiefly distinguished by the sharply angled produced growth of the umbones.

Species 14. (Mus. Cuming.)

DONAX COLUMBELLA. *Don. testâ trigono-ovatâ, tenuiculâ, compressâ, sub lente minutè radiatim striatâ, nitente, rosaceâ vel purpurascens-cinereâ, concentricè fasciatâ, latere antico rotundato, postico declivi-truncato, obtusè angulato.*

THE LITTLE DOVE DONAX. Shell triangularly ovate, rather thin, compressed, beneath the lens minutely radiately striated, shining, pinkish or purplish-ash, concentrically banded, anterior side rounded, posterior slantingly truncated, obtusely angled.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 242.

Hab. Swan River; Dr. Bacon.

A somewhat delicate species, variously coloured.

Species 15. (Mus. Cuming.)

DONAX GUNEATA. *Don. testâ subtrigono-oblongâ, compressâ, sub lente minutè radiatim striatâ, nitente, purpurascens, albifasciatâ, interdum plumbeâ, lineis rufescentibus subtilissimè venosâ, latere antico acuminato-rotundato, postico latè angulato et crispato-granato.*

THE WEDGE-LIKE DONAX. Shell subtriangularly oblong, compressed, beneath the lens minutely radiately striated, shining-purplish, white-banded, sometimes lead-

colour, finely veined with reddish lines, anterior side acuminate rounded, posterior broadly angled and crispately granulated.

LINNEÆUS, Syst. Nat. (12th edit.) p. 240.

Hab. Ceylon.

A somewhat broad compressed species, crisply granulated on the posterior area, which is rather broadly bluntly angled.

Species 16. (Mus. Cuming.)

DONAX PUNCTATO-STRIATA. *Don. testâ trigono-ovatâ, solidiusculâ, umbonibus subcentralibus, compresso-gibbosis, radiatim punctato-striatis, striis sulciformibus; pallidè livido-fusâ vel fulvo-castaneâ; lateribus declivi-angulatis, postico concavo-appresso.*

THE PUNCTURED-STRIATED DONAX. Shell triangularly ovate, rather solid; umbones nearly central, compressly gibbous, radiately punctured-striated, striae groove-like; pale livid-brown, or fulvous-chestnut; sides slantingly angled, posterior concavely appressed.

HANLEY, Pro. Zool. Soc. 1843, p. 5.

Hab. Mazatlan, Gulf of California.

Of a peculiar stoutly angled *Crassatella*-like form, with the umbones nearly central.

Species 17. (Mus. Cuming.)

DONAX OVALINA. *Don. testâ ovatâ, compressiusculâ, utrinque convexâ, concentricè rudè striatâ, albidâ, nigricante-purpureo interruptè radiatâ, vel plumbeo-cinereo obscurè tenuivenosâ; lateribus subæqualiter rotundatis.*

THE OVAL DONAX. Shell ovate, rather compressed, everywhere convex, concentrically rudely striated, whitish, interruptedly rayed with darkish purple or leaden-ash, obscurely finely veined; sides nearly equally rounded.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. —?

This has hardly the character of *Donax*, being in no degree wedge-shaped, but rather the external form of *Amphideuma*.



DONAX.

PLATE IV.

Species 18. (Mus. Cuming.)

DONAX NAVICULA. *Don. testā oblongo-rhomboidē, gibbosiusculā, solidā, lævigatā, obsoletè radiatim sulcatā, epidermide pallidè corneā nitente indutā, umbonibus subcentralibus, latere antico acuminato-rotundato, postico acuminato-truncato, rostrato; lunulā areāque posticā concavis, fumeo-nigricantibus, nitentibus.*

THE BOAT DONAX. Shell oblong-rhomboid, rather gibbous, solid, smooth, obsoletely radiately grooved, covered with a pale shining horny epidermis; umboes nearly central, interior side acuminately rounded, posterior acuminately truncated, beaked; lunule and posterior area concave, smoky-black, shining.

HANLEY, MS. (Mus. Cuming.)

Hab. Gulf of Nicoyo, Central America; Cuming.

A very distinct and characteristic species, both in form and colouring.

Species 19. (Mus. Cuming.)

DONAX ANATINUS. *Don. testā ovato-oblongā, versus marginem subcompressā, radiatim tenuistriatā, albidā, epidermide fulvescente indutā, ad umbones subviolaceis; latere antico rotundato, postico obtusè declivi-angulato, vix truncato.*

THE DUCK'S BILL DONAX. Shell ovately oblong, rather compressed towards the margin, radiately finely striated, whitish, covered with a fulvous horny epidermis, a little violet at the umboes; anterior side rounded, posterior obtusely slantingly angled, scarcely truncated.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vi. p. 249.

Donax trunculus, Auct. Brit.

Donax ruber, Turton.

Cuneus vittatus, Da Costa.

Hab. British Seas.

The well-known species of our coast, abundant on all sides.

Species 20. (Mus. Cuming.)

DONAX LUNULARIS. *Don. testā subcylindraceo-oblongā, crassiusculā, valdè gibbosā, radiatim densè tenuissimè sulcatā, apicidè, concentricè saturatè fasciatā; latere*

antico subproducto, rotundato, postico abruptè latè truncato.

THE LUNULED DONAX. Shell somewhat cylindrically oblong, rather thick, very gibbous, radiately densely very finely grooved, fawn-coloured, concentrically darker-banded; anterior side somewhat produced, rounded, posterior abruptly broadly truncated.

PHILIPPI, MS. (Mus. Cuming.)

Hab. —?

It is the posterior area, and not the lunule, as the name given to this species would infer, is so prominently developed.

Species 21. (Mus. Cuming.)

DONAX CULTER. *Don. testā subcylindraceo-oblongā, medio contractā, radiatim densè tenuisulcatā, cærulescentigriseā, violaceo pallidè tinctā, intus intensè violaceā; latere antico rotundato, postico gibboso, declivi-rostrato, vix angulato.*

THE PLOUGH-SHARE DONAX. Shell somewhat flexuously oblong, contracted in the middle, radiately densely finely grooved, bluish-grey, tinged with pale violet, deep violet within; anterior side rounded, posterior gibbous, slantingly beaked, scarcely angled.

HANLEY, MS. (Mus. Cuming.)

Hab. Gulf of California.

Distinguished from all other species by its peculiar *Modiola*-like form.

Species 22. (Fig. a, b, Mus. Cuming.)

DONAX CAYENNENSIS. *Don. testā ovato-cuneatā, subtriangonā, compressā, densè tenuissimè sulcatā, liris posticis creberrimè crispato-clathratis; latere antico rotundato, postico abruptè convexo-truncato; lutescente-albā, ad umbones roseā, versus marginem griseo-fasciatā, vel violaceo-fusca, ad umbones radiatā.*

THE CAYENNE DONAX. Shell ovately wedge-shaped, subtriangular, compressed, densely very finely grooved, posterior ridges very closely crisply latticed; anterior side rounded, posterior abruptly convexly truncated, yellowish-white, rose at the umboes, grey banded towards the margin, or violet-brown, rayed at the umboes.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 245.

Hab. Panama and St. Elena, West Columbia; Cuming.

An interesting species of regular wedge-form, variously coloured.

Species 23. (Fig. a, b, Mus. Cuming.)

DONAX TRUNCULUS. *Don. testā elongato-oblongā, convexā, solidiusculā, posticē leviter sinuosā, radiatim striatā, versus marginem leviter sulcatā; albidā, epidermide fulvescente indutā, interdum radiatā, nitente; latere antico rotundato, postice breviter obtusē angulato, subtruncato.*

THE TRUNCATED DONAX. Shell elongately oblong, convex, rather solid, slightly sinuous posteriorly, radiately striated, striae slightly grooved towards the margin; whitish, covered with a fulvous horny epidermis, sometimes rayed, shining; anterior side rounded, posterior shortly obtusely angled, slightly truncated.

LINNÆUS, Syst. Nat. (12th edit.) p. 1127.

Donax venusta, Poli.

Donax longa, Bronn.

Donax biradiata and *searadiata*, Wood.

Hab. European Seas.

Of stout, oblong, rather solid growth, sometimes plain, sometimes rayed.

Species 24. (Mus. Cuming.)

DONAX CONTUSA. *Don. testā elongato-oblongā, subflexuosā, obsolete radiatim sulcatā, sulcis numerosis, versus umbones ecanidis; fulvescente-albā, umbonibus rufescentibus, pallidē radiatis; umbonibus subcentralibus;*

latere antico rotundato, postico obtusē flexuoso-rostrato, vix truncato.

THE BRUISED DONAX. Shell elongately oblong, rather flexuous, obsolete radiately grooved, grooves numerous, fading towards the umboes; fulvous white, umboes reddish, pale-rayed; umboes nearly central, anterior side rounded, posterior obtusely flexuously beaked, scarcely truncated.

Hab. Mazatlan, Gulf of California.

Of an oblong bean-shaped form, scarcely truncated on the posterior side, with the umboes nearly central, and peculiarly white-rayed on a purple-red ground.

Species 25. (Mus. Cuming.)

DONAX SEMISTRIATA. *Don. testā subtrigono-oblongā, medio gibbosā, radiatim lineari-sulcatā, striae concentricis sub latus posticum decussatā; albidā, pallidē carneā obscure radiatā, epidermide fulvescente corneā versus marginem indutā; latere antico subacuminato-rotundato, postico subflexuoso, obtusē declivi-angulato.*

THE HALF-STRIATED DONAX. Shell somewhat triangularly oblong, gibbous in the middle, radiately linearly grooved, decussated with concentric striae on the posterior side; whitish, obscurely rayed with pale flesh, covered towards the margin with a fulvous horny epidermis; anterior side somewhat acuminately rounded, posterior subflexuous, obtusely slantingly angled.

POLI, Test. Siciliæ, pl. 3. f. 12.

Donax fabagella, Lamarck.

Hab. Mediterranean.

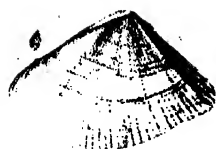
The posterior side of this species is decussated by a row of concentric grooved striae.



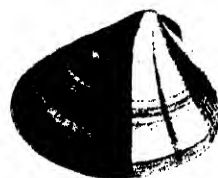
26a



26b



28a



28b



29a



29b



DONAX.

PLATE V

Species 26. (Fig. a, b, c, Mus. Cuming.)

DONAX RADIANUS. *Don. testâ trigono-ovalâ, subtriangulâ, compressâ, transversim striatâ, variâ coloratâ, nunc plumbeâ, alba lentiginosâ, nunc lutescenti-albidâ, rufâ-radiatâ, inæquilaterali, latere postico brevi, declivi, antico acuminato-rotundato.*

THE RAYED DONAX. Shell triangularly ovate, rather solid, compressed; transversely striated; variously coloured, sometimes lead-coloured, freckled with white, sometimes yellowish-white, rayed with red, inequilateral, posterior side short and slanting, anterior acuminately rounded.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 241.
Hab. Philippine Islands; Cuming.

I have not given to this species the name of *D. faba*, Chemnitz, because the figure in the 'Conchylien Cabinet,' vol. vi. pl. 26. f. 267, has not the triangular form characteristic of it. Lamarck has quoted that as a synonyme in error.

Species 27. (Mus. Cuming.)

DONAX LAMARCKII. *Don. testâ oblongo-ovalâ, solidiusculâ, gibbosâ, radiatim undique densè liratâ, carneo-lutescente, latere antico lanceolato-rotundato, postico latè declivi-truncato.*

LAMARCK'S DONAX. Shell oblong-ovate, rather solid, gibbous, everywhere densely ridged, flesh-tinged yellow, anterior side lanceolately rounded, posterior broadly slantingly truncated.

DESHAYES, MSS. Mus. Cuming.

Hab. —?

A rather gibbous solid species, distinctly closely ridged throughout in rays from the umbos.

Species 28. (Fig. a, b, Mus. Cuming.)

DONAX BICOLOR. *Don. testâ ovato-conicâ, compressiusculâ, concentricè striatâ, striis posticis obsolete crispato-granulatis, striis exiguis radiantibus decussatis, variâ coloratâ, nunc rosaceâ, nunc albidâ, plumbeo radiatâ, latere antico rotundato, postico compressè obtusè angulato.*

THE TWO-COLOURED DONAX. Shell ovately wedge-shaped, rather compressed, concentrically striated,

the posterior striæ obsolete crisply granulated, decussated with very fine raised striæ, variously coloured, sometimes rose-tinted, sometimes whitish, rayed with lead-colour, anterior side rounded, posteriorly compressly obtusely angled.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vi. p. 243.
Hab. Island of Negros, Philippines; Cuming.

Chiefly distinguished by its broad compressly ovate form, and by the slight obtusely angled growth of the posterior side. In colour it is one of the most variable species of the genus.

Species 29. (Mus. Cuming.)

DONAX CONRADI. *Don. testâ elongato-ovalâ, gibbosiusculâ, ad marginem compressâ, lævigatâ, radiatim crebrisulcatâ, sulcis linearibus, liris intermediis posticis minutè serratis; albidâ, cinereo-fusciatâ; umbonibus purpureis, albo maculatis; lunulâ areâque posticâ cinereo-purpureis, latere antico elongato-rotundato, antico subconcavo-truncato.*

CONRAD'S DONAX. Shell elongately ovate, rather gibbous, compressed at the margin, smooth, radiately closely grooved, grooves linear, the posterior intermediate ridges minutely serrated; whitish, ash-banded; umbos purple, white-tipped; lunule and posterior area ash-purple, anterior side elongately rounded, posterior rather concavely truncated.

DESHAYES, Pro. Zool. Soc. March, 1854.

Hab. Gulf of California.

An elongately oblong species, in which the posterior side has a slightly arched beaked growth.

Species 30. (Mus. Cuming.)

DONAX OBESULA. *Don. testâ abruptè cuneatâ, valdè gibbosâ, radiatim densè tenuiliratâ, concentricè pulcherrimè tenuicancellatâ, lutescente, latere antico peculiariter acuminato, postico latè truncato.*

THE STOUT DONAX. Shell abruptly wedge-shaped, very gibbous, radiately densely finely ridged, concentrically beautifully finely cancellated, yellowish, anterior side peculiarly acuminated, posterior broadly truncated.

DESHAYES, Pro. Zool. Soc. March, 1854.



DONAX.

PLATE IX.

Species 60. (Mus. Hanley.)

DONAX SAXULUM. *Don. testā suboblongo-trigonā, compressā, solidiusculā, radiatim lirato-striatā, albidā, nitente, versus marginem epidermide corneā stramineā indulā, latere postico declivi-angulato, antico longiore, rotundato.*

THE LITTLE STONE DONAX. Shell somewhat oblong triangular, compressed, rather solid, radiately ridge-striated, whitish, shining, covered towards the margin with a straw-coloured horny epidermis, posterior side slantingly angular, interior longer, rounded.

Hab. — ?

A whitish shining shell, although rayed throughout with ridge-like striae, rather compressed, with the posterior side more angularly slanting than usual.

Species 61. (Mus. Hanley.)

DONAX INCERATA. *Don. testā obliquē trigonā, subcurvatā, concentricē leviter striatā, striis radiantibus obsoletis decussatā, subpellucido-albā, carneo-roseo tinctā, latere postico abruptē rotundato, antico acuminato-rotundato.*

THE WAXEN DONAX. Shell obliquely triangular, slightly curved, concentrically faintly striated, decussated with obsolete radiating striae, semitransparent white, tinged with flesh-rose, posterior side abruptly rounded, anterior acuminately rounded.

Hab. — ?

This odd valve, from Mr. Hanley's collection, is not to be identified with any previously described species of the genus. It is of a subtransparent shining white texture, delicately tinged with flesh-rose, obsoletely decussately striated, and is equally characteristic in outline.

Species 62. (Mus. Cuming.)

DONAX OBSCURA. *Don. testā trigono-ovatā, subcompressā, concentricē minutissimē densē striatā, calcareo-albā, latere postico truncato-rotundato, antico longiore, rotundato.*

THE OBSCURE DONAX. Shell triangularly ovate, rather compressed, concentrically very minutely closely striated, chalk-white, posterior side truncately rounded, anterior rather longer, rounded.

Hab. — ?

An opake-white species, very closely minutely concentrically striated, with the side not particularly unequal.

Fig. 63. (Mus. Hanley.)

This shell, from Mr. Hanley's collection, named *D. Panamensis*, Philippi, in the author's own handwriting, proves to be a variety of *D. Cayennensis*.

Species 64. (Mus. Hanley.)

DONAX META. *Don. testā abbreviato-conicā, solidiusculā, radiatim lirato-striatā, lutescente-albā, intus vitellinā, latere postico lato, tumidiusculo, acutē angulato-truncato, areā posticā eximie corrugatā et striatā, latere antico subcontracto, acuminato-rotundato.*

THE CONE DONAX. Shell shortly triangular, rather solid, radiately ridge-striated, yellowish-white, interior yolk-yellow, posterior side broad and rather swollen, sharply angularly truncated, the posterior area delicately wrinkled and striated, anterior side rather contracted, acuminately rounded.

Hab. — ?

Of this species we have but an odd valve, broadly angularly truncated and a little swollen on the posterior side, the anterior being rather contracted and acuminately rounded.

Species 65. (Mus. Hanley.)

DONAX INTRORADIATA. *Don. testā trigono-ovatā, radiatim densē sulcato-striatā, griseo-violaceā, pallidē violaceo biradiatā, radiis intus intensē violaceis, latere postico brevissimo, lato, gibboso, ad angulum funiculato, ad aream densissimē corrugato et striato, latere antico gradatim compresso-acuminato.*

THE INWARDLY-RAYED DONAX. Shell triangularly ovate, radiately closely groove-striated, greyish-violet, marked with two faint violet rays, the rays deep violet in the interior, posterior side very short, broad, gibbous, raised into a cord at the angle, very closely wrinkled and striated on the area, anterior side gradually compressly acuminated.

Hab. — ?

A characteristic species, painted with two deep violet internal rays faintly indicated without, broadly gibbous

on the posterior side, with the edge raised into a cord, and compressly acuminate anteriorly.

Species 66. (Mus. Hanley.)

DONAX VELLICATA. *Don. testā subelongato-oblongā, radiatim densè sulcato-striatā, griseo-albā, ad umbones purpurascēte, albo minutè biradiatā, latere postico abruptè truncato, ad marginem contracto, latere antico rotundato.*

THE NIPPED DONAX. Shell rather elongately oblong, radiately closely groove-striated, greyish-white, purplish at the umbones, and minutely two-rayed with white, posterior side abruptly truncated, contracted at the margin, anterior side rounded.

Hab. — ?

A rather solid elongately oblong species, somewhat bluntly slopingly truncated at the posterior end, which towards the ventral margin is peculiarly contracted or pinched.

Species 67. (Mus. Hanley.)

DONAX SPICULUM. *Don. testā lanceolato-oblongā, angustā, radiatim tenuiter sulcato-striatā, carneo-fulvescente, epidermide corneā flavicante juxta marginem indutā, latere postico brevissimo, obtusè angulato, antico lanceolato-rotundato.*

THE LITTLE BOLT DONAX. Shell lanceolately oblong,

narrow, radiately finely groove-striated, flesh-tinged fulvous, covered next the margin with a yellowish horny epidermis, posterior side very short, obtusely angled, anterior lanceolately rounded.

Hab. — ?

Of this species, also from Mr. Hanley's collection, there is but a single valve. It is of a peculiarly lanceolate form, of a very short abrupt growth posteriorly.

Species 68. (Mus. Hanley.)

DONAX BITINCTA. *Don. testā trigono-oblongā, subcurvatā, versus marginem compressā, radiatim tenuiter sulcato-striatā, albidā, radio lato roseo-purpurascēte pictā, latere postico declivi-angulato, areā subconcaṽā, medio elevatā, roseo-purpurascēte, latere antico compresso-rotundato.*

THE DOUBLE-STAINED DONAX. Shell triangularly oblong, slightly curved, compressed towards the margin, radiately finely groove-striated, whitish, painted with a broad rose-purple ray, posterior side slopingly angled, area subconcave, raised in the middle, rose-purple, anterior side compressly rounded.

Hab. — ?

Of an oblong curved form, with the posterior area gently angularly sloping, rather concavely raised, and stained in a characteristic manner with rose-purple, of which colour there is a single broad ray in the middle of each valve.

DONAX.

| | Plate | Species | | Plate | Species |
|---------------------------------------|-------|---------|---|-------|---------|
| <i>ænea, Morch.</i> | VIII. | 52 | <i>lunularis, Philippi</i> | IV. | 20 |
| <i>acuminata, Deshayes</i> | VIII. | 58 | <i>Madagascariensis, Wood</i> | VIII. | 50 |
| <i>acutangula, Deshayes</i> | VI. | 33 | <i>meta, Reeve</i> | IX. | 64 |
| <i>anatinus, Lam.</i> | IV. | 19 | <i>navicula, Hanley</i> | IV. | 18 |
| <i>asper, Hanley</i> | II. | 12 | <i>nitida, Deshayes</i> | VI. | 34 |
| <i>assimilis, Hanley</i> | II. | 10 | <i>Nuculoides, Reeve</i> | VIII. | 59 |
| <i>bella, Deshayes</i> | VI. | 41 | <i>obesa, D'Orb.</i> | VII. | 49 |
| <i>bicolor, Lam.</i> | V. | 28 | <i>obesula, Deshayes</i> | V. | 30 |
| <i>bitincta, Reeve</i> | IX. | 68 | <i>obscura, Reeve</i> | IX. | 62 |
| <i>Californica, Conrad</i> | VI. | 40 | <i>ovalina, Deshayes</i> | III. | 17 |
| <i>carinata, Hanley</i> | II. | 11 | <i>Owcnii, Gray</i> | VI. | 37 |
| <i>Cayennensis, Lam.</i> | IV. | 22 | <i>paxillus, Reeve</i> | VIII. | 55 |
| <i>clathrata, Deshayes</i> | VIII. | 57 | <i>petallina, Deshayes</i> | VIII. | 51 |
| <i>columbella, Lam.</i> | III. | 14 | <i>polita, Poli</i> | VI. | 42 |
| <i>complanatus, Mont.</i> | VI. | 42 | <i>pubescens, Linn.</i> | I. | 1 |
| <i>compressa, Lam.</i> | II. | 8 | <i>pulchella, Hanley</i> | VI. | 35 |
| <i>Conradi, Deshayes</i> | V. | 29 | <i>punctato-striata, Hanley</i> | III. | 16 |
| <i>contusa, Reeve</i> | IV. | 24 | <i>radians, Lam.</i> | V. | 26 |
| <i>culter, Hanley</i> | IV. | 21 | <i>ringens, Lam.</i> | I. | 5 |
| <i>cuneata, Linn.</i> | III. | 15 | <i>ruber, Turton</i> | IV. | 19 |
| <i>deltoides, Lam.</i> | I. | 4 | <i>rugosa, Linn.</i> | II. | 9 |
| <i>denticulata, Linn.</i> | VII. | 48 | <i>saxulum, Reeve</i> | IX. | 60 |
| <i>dentifera, Hanley</i> | I. | 2 | <i>scapellum, Gray</i> | VI. | 39 |
| <i>Dysoni, Deshayes</i> | VIII. | 54 | <i>scortum, Linn.</i> | J. | 1 |
| <i>epimerdia, Lam.</i> | I. | 4 | <i>semistriata, Poli</i> | IV. | 25 |
| <i>faba, Chemn.</i> | V. | 26 | <i>semisulcata, Hanley</i> | VIII. | 56 |
| <i>fabagella, Lam.</i> | IV. | 25 | <i>serra, Chemn.</i> | I. | 5 |
| <i>gracilis, Hanley</i> | VI. | 38 | <i>sordida, Reeve</i> | V. | 32 |
| <i>granifera, Deshayes</i> | VII. | 43 | <i>spiculum, Reeve</i> | IX. | 67 |
| <i>Hanleyana, Philippi</i> | II. | 6 | <i>Ticaonica, Hanley</i> | III. | 13 |
| <i>incarnata, Chemn.</i> | VIII. | 53 | <i>transversa, Sow.</i> | VI. | 36 |
| <i>incerata, Reeve</i> | IX. | 61 | <i>trifasciata, Reeve</i> | II. | 7 |
| <i>introradiata, Reeve</i> | IX. | 65 | <i>trunculus, Auct.</i> | IV. | 19 |
| <i>Keyi, Adams</i> | VIII. | 50 | <i>trunculus, Linn.</i> | IV. | 23 |
| <i>Lamarckii, Deshayes</i> | V. | 27 | <i>variabilis, Say</i> | VII. | 47 |
| <i>lævigata, Deshayes</i> | V. | 31 | <i>variegata, Reeve</i> | VII. | 45 |
| <i>longa, Philippi</i> | VI. | 42 | <i>vellicata, Reeve</i> | IX. | 66 |
| <i>lubrica, Hanley</i> | VII. | 46 | <i>venusta, Poli</i> | VII. | 44 |

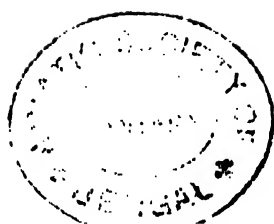
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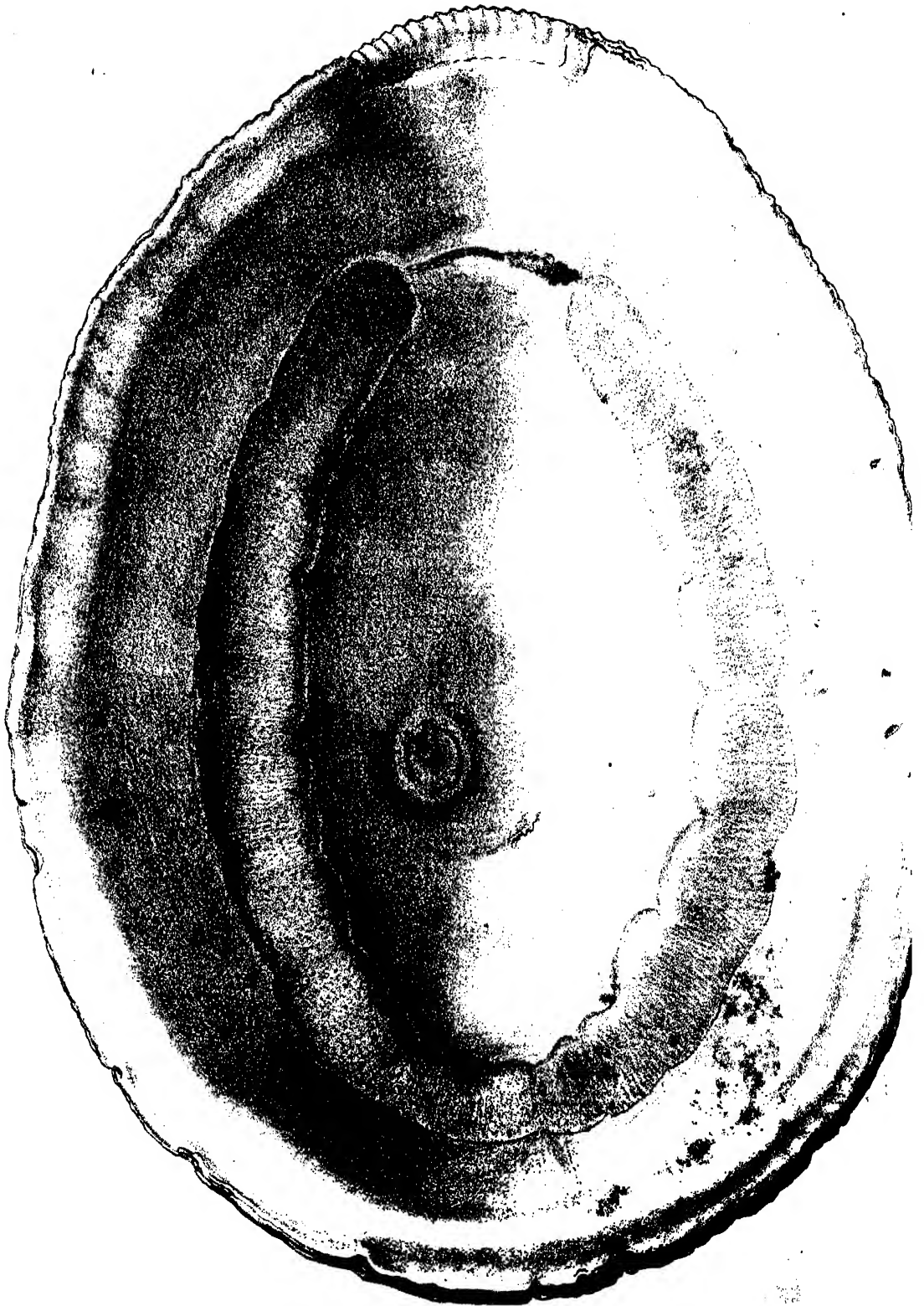
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MONOGRAPH
OF THE GENUS
P A T E L L A.

“ At distance viewed, it seems to lie
On its rough bed so carelessly,
That 'twould an infant hand obey,
Stretched forth to seize it in his play.
But let that infant's hand draw near,
It shrinks with quick instinctive fear,
And clings as close, as though the stone
It rests upon, and it, were one ;
And should the strongest arm endeavour[^]
The Limpet from its rock to sever,
'Tis seen its loved support to clasp,
With such tenacity of grasp,
We wonder that such strength should dwell
In such a small and simple shell.”—*Wordsworth*.





PATELLA.

PLATE I.

Genus PATELLA, Linnaeus.

Testa ovata, plus minus convexa, patelliformi, non spiralis, apice interdum centrali, plerumque plus minus antice inclinato, sæpius radiatim costata vel lirata, interdum squamata, margine plerumque crenulata; impressio muscularis elliptica, antice interrupta.

Shell ovate or rounded, more or less convex, dish-shaped, not spiral, apex sometimes central, generally more or less inclined anteriorly, mostly radiately ribbed or ridged, sometimes scaly, generally crenulated at the margin; muscular impression elliptical, interrupted anteriorly.

The Limpets, properly so called, have been collected together under the generic title of *Patella*, from the resemblance of their shell to the form of a dish of that name, formerly used by the Latins for carrying meat in their sacrifices. In structure it is the most simple of all shells, being an unconvoluted shield, covering the soft parts of the animal, more or less raised in convexity, not spiral, inclining to an apex, rarely more than superficially developed, but sometimes bent over anteriorly into a minute hook. From this apex radiate striæ, ridges, or ribs, which are sometimes scaled, and have the interstices sometimes wrought into lattice work by concentric ridges. It is only very rarely, however, that the shell is so sculptured, the ribs or ridges being for the most part smooth, though presenting abundant characteristic varieties of form and distribution. The painting of the *Patellæ* is also exceedingly varied; the prevailing pattern consisting of rays, modified by various causes to a degree which renders the different states of a species often extremely difficult of identification.

The *Patellæ* inhabit all latitudes, ranging from the Equator to the Arctic Seas, where the *P. testudinalis* has been found by Sir Edward Belcher in Wellington Channel, the most northern limit of animal life; and they are everywhere abundant in their kind. Some of the finest species are found about the Cape of Good Hope.

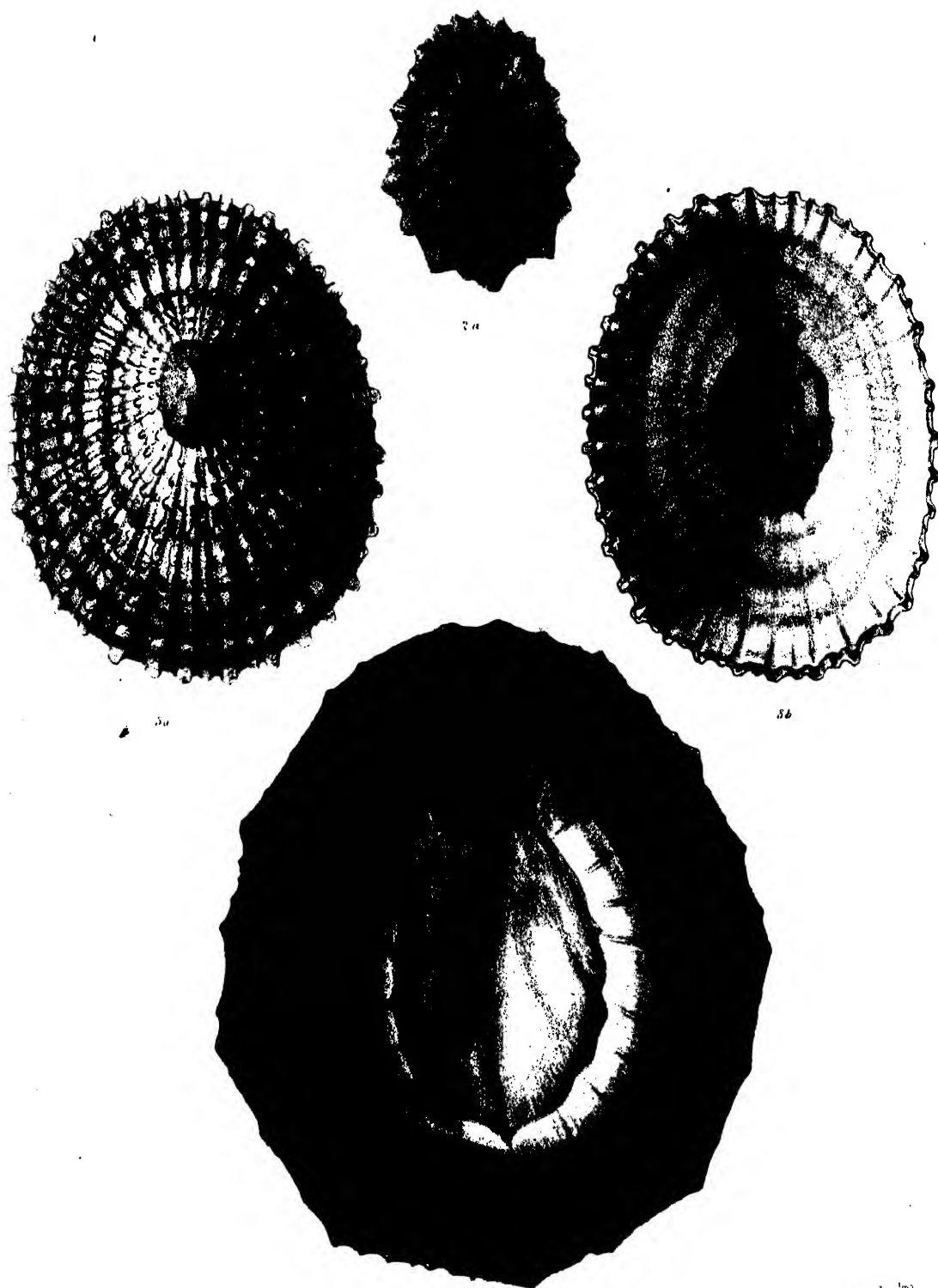
Species 1. (Mus. Cuming.)

PATELLA MEXICANA. *Pat. testâ oblongo-ovatâ, antice attenuatâ, medio subacutè convexâ, versus marginem planatâ, radiatim costatâ, costis subcompressis, rudibus, irregularibus, plus minus obsolete, liris intermediis scabrosis in testâ juniore; luteo-albâ, hic illic pallidissimè ferrugineo-tinctâ, intus pallidissimè ferrugineo tinctâ.*

THE MEXICAN LIMPET. Shell oblong-ovate, attenuated in front, rather sharply convex in the middle, flattened towards the margin, radiately ribbed, ribs rather compressed, rude, irregular, more or less obsolete, with intermediate scabrous ridges in the young shell; yellowish-white, here and there very faintly rust-tinged, and very faintly rust-tinged within.

BRODERIP and SOWERBY, Zool. Journ. vol. iv. p. 369.
Hab. Acapulco; Cuming. Mazatlan; Carpenter.

This fine species, the largest, in an eminent degree, of the genus, is of a sharply convex form, flattened towards the margin, distinguished exteriorly by a series of irregular radiating ribs, which soon become obsolete as the shell advances in growth. It is, within and without, of a uniform white, tinged with rust.



PATELLA.

PLATE II.

Species 2. (Fig. *a, b*, Mus. Cuming.)

PATELLA OCULUS. *Pat. testā suborbiculari-ovulā, converiusculā, radiatim costatā et striatā, costis in testā juniore crenulatis, duodecim latioribus majoribus; lutescente, nigro variegatā, coloribus ætate evanescentibus, intus prope marginem intensè nigro-brunnē, deinde æneo-castaneā, deinde opaco-cærulescente, nucleo fuscrescente-nitellino.*

THE EYE LIMPET. Shell somewhat orbicularly ovate, moderately convex, radiately ribbed and striated, ribs in the young shell crenulated, twelve broader and larger; yellowish, variegated with black, the colours fading with age, interior deep black-brown near the margin, then bronze-chestnut, then light opake-blue, with a brownish-yelk nucleus.

BORN, Mus. Test. Vindobonensis, p. 418.

Hab. Cape of Good Hope.

The rich eye-like colouring of the interior of this species is always a characteristic feature.

Species 3. (Fig. *a, b*, Mus. Cuming.)

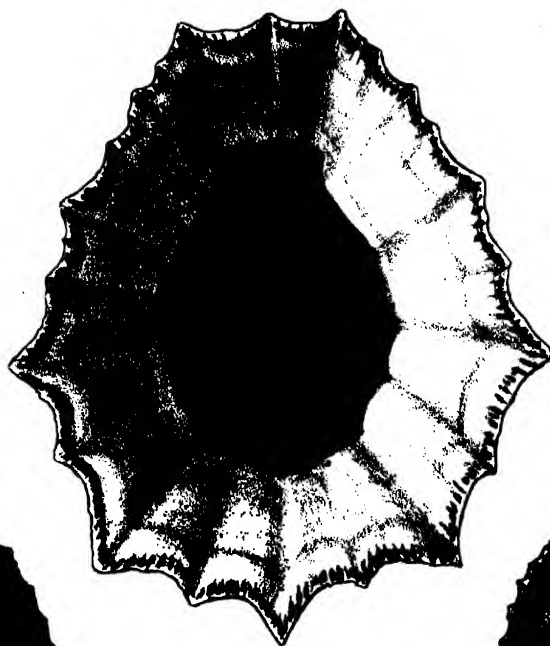
PATELLA NIGRISQUAMATA. *Pat. testā ovatā, erecto-conicā, altā, radiatim costatā, costis ad quadraginta, fortiter nodoso-squamatis; flavicante, squamis versus apicem hic illic nigris, intus flavicante-albā, nucleo rufescente-fusco, centro lacteo.*

THE BLACK-SCALED LIMPET. Shell ovate, erectly conical, high, radiately ribbed, ribs about forty, strongly nodosely scaled; yellowish, scales towards the apex here and there black, interior yellowish-white, with a reddish-brown nucleus, with the centre milk-white.

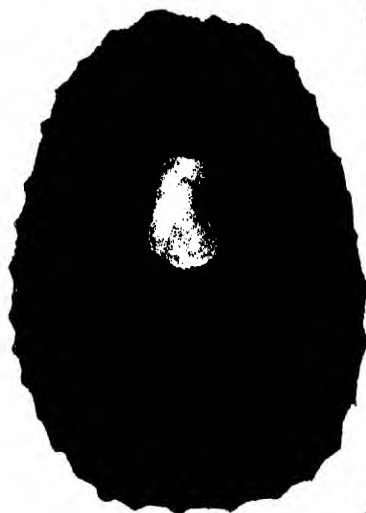
Hab. Australia.

A very characteristic elevately conical species, sculptured with about forty prominently nodule-scaled ribs, which are rather irregular in their development. The ground-colour of the shell is a deep opake-yellow, and the nodules towards the apex more especially in the young are here and there deep cinder-black.

October, 1854.



4a



5a



5b



4b

PATELLA.

PLATE III.

Species 4. (Fig. *a, b*, Mus. Cuming.)

PATELLA GRANATINA. *Pat. testā ovalā, suboctagonā, antice coarctatā, subelevatā, radialim fortiter costatā, costis numerosis, subcrenulis, octo plerumque majoribus, subacutis; cærulescente-albā, olivaceo-nigro profusè maculatā, intus nucleo amplo purpureo-rufo.*

THE GARNET LIMPET. Shell ovate, suboctagonal, contracted in front, rather raised, radiately strongly ribbed, ribs numerous, subcrenulated, eight generally larger, rather sharp; bluish-white, profusely spotted with olive-black, interior with a large deep purple-red nucleus.

LINNÆUS, Syst. Nat. (12th edit.) p. 1258.

Hab. Cape of Good Hope.

Distinguished by its mottled olive-black spots on the outside, and deep purple burnt-red nucleus inside. There is also, in young specimens, an appearance of crenulation both on the ribs and in the interstices. With age the ribs become sharper and the crenulation more obscure.

Species 5. (Fig. *a, b*, Mus. Cuming.)

PATELLA PLUMBEA. *Pat. testā suboblongo-ovatā, ad latera antice coarctatā, convexiusculā, radialim costatā, costis numerosis, parvis, irregularibus, striis concentricis crenulatis; nigricante-plumbēā, costis saturatioribus, intus pallidè cærulescente-plumbēā, nucleo amplo, fuscescente-titellino.*

THE LEAD LIMPET. Shell somewhat oblong-ovate, contracted anteriorly at the sides, rather convex, radiately ribbed, ribs numerous, small, irregular, crenulated with concentric striæ; blackish lead-colour, ribs darker, interior pale bluish-lead, nucleus larger, brownish-yelk.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 530.

Hab. Senegal.

Of a uniform dark lead-colour, rayed with small almost superficial crenulated ribs, and having a conspicuous opaque-brownish yelk nucleus in the interior.



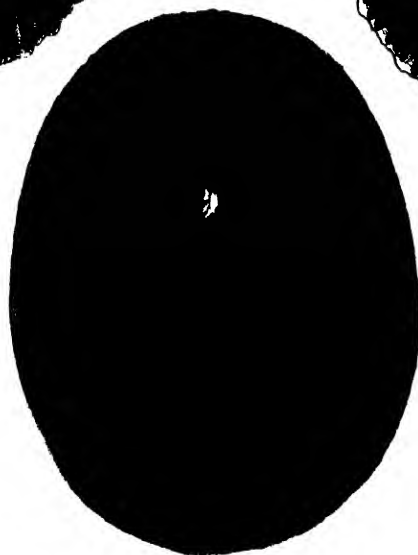
6a



7a



7b



PATELLA

PLATE IV.

Species 6. (Fig. *a, b*, Mus. Cuming.)

PATELLA TESTUDINARIA. *Pat. testā ovato-rotundatā, crassiusculā, semipellucidā, apice anticē subinclinato, striis radialis et concentricis decussatā; lutescente, intensè purpureo-rufa reticulato-radiatā et maculatā, intus argenteā, ad marginem purpureo maculatā.*

THE TORTOISE-SHELL LIMPET. Shell ovately rounded, rather thick, semipellucid, apex rather inclined anteriorly, decussated with radiating and concentric striae; yellowish, net-rayed and blotched with deep purple-red, interior silvery, blotched with purple at the margin.

LINNAEUS, Syst. Nat. (12th edit.) p. 1260.

Lottia testudinaria, Sowerby.

Hab. Philippine Islands; Cuming.

Though a solid shell, this species is comparatively of transparent substance. The purple-red painting is deposited in a peculiar smeary style, always uniform and characteristic. The interior is lined with a delicate silvery naere, into which the dark red rays blend from the margin.

Species 7. (Fig. *a, b*, Mus. Cuming.)

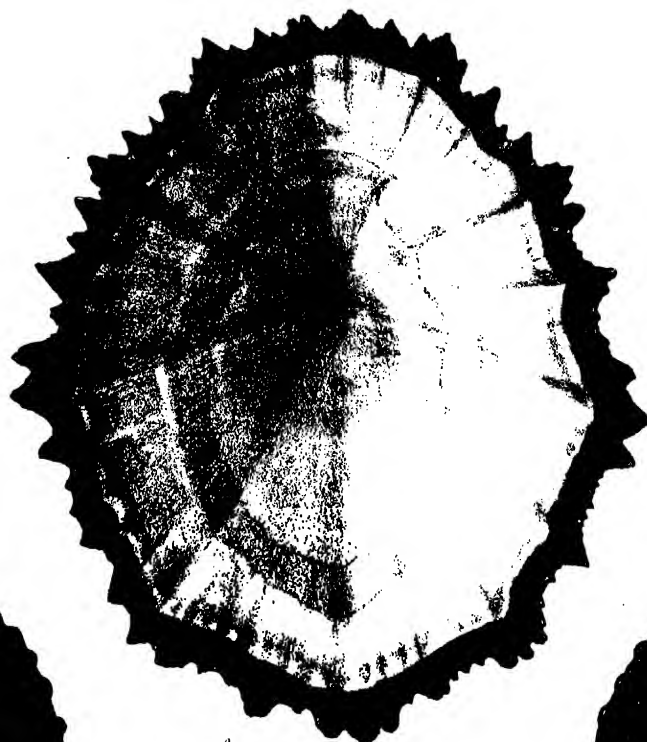
PATELLA ZEBRA. *Pat. testā ovali, acutè convexā, subaltā, apice prominente, anticē subinclinato, radiatim rudè nodoso-costatā, costis ætate evanescentibus; griseo-albā, nigro-fusco radiatim strigatā, intus albā, titello tinctā, margine maculis nigro-fuscis binis conspicuè picto.*

THE ZEBRA LIMPET. Shell ovate, sharply convex, rather high, apex prominent, somewhat inclined anteriorly, radiately roughly nodosely ribbed, ribs fading with age; greyish-white, radiately streaked with black-brown, interior white, tinged with yelk-yellow, margin conspicuously painted with narrow black-brown blotches in pairs.

Patella rustica, Meuke (not of Linnaeus).

Hab. Swan River.

A very characteristic species, strongly rudely nodule-ribbed in the young state, the ribs being about two-and-twenty in number, but with age they become faint. The shell is of a greyish-white, vividly rayed with black-brown streaks, and the inner margin is conspicuously and neatly painted with narrow blotches of the same colour in pairs.



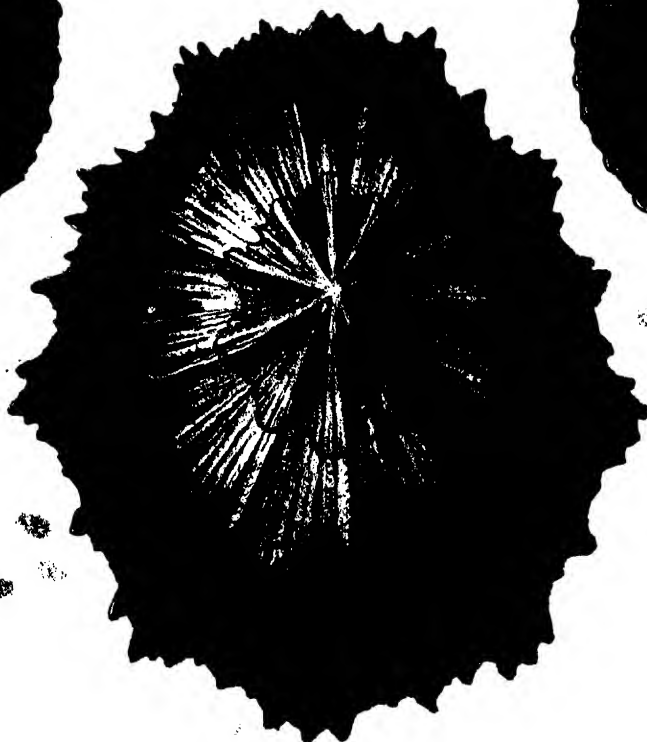
8a



9a



9b



8b

PATELLA.

PLATE V.

Species 8. (Fig. *a, b*, Mus. Cuming.)

PATELLA RUSTICA. *Pat. testā ovatā, indistinctè octagonā, convexiusculā, solidā, acutè rudè irregulariter costatā, costis versus marginem squamatis; ferrugineo-rufā, intus lacteā, margine acutè irregulariter squamato, pallidè rufescente.*

THE RUSTIC LIMPET. Shell ovate, indistinctly octagonal, rather convex, solid, sharply rudely irregularly ribbed, ribs scaled towards the margin; rust-red, milk-white within, margin sharply irregularly squamate, pale reddish.

LINNÆUS, Syst. Nat. (12th edit.) p. 1261.

Hab. Cape of Good Hope.

A bold roughly ribbed species, the ribs being bluntly scaled towards the margin, of a peculiar rust-red colour, milk-white in the interior.

Species 9. (Fig. *a, b*, Mus. Cuming.)

PATELLA ÆNEA. *Pat. testā suboblongo-ovatā, altā, apice anticè inclinato, radiatim squamato-costatā, squamis brevissimis, subdistantibus; intusè sordidè fuscā, intus æneo-castaneā.*

THE BRONZE LIMPET. Shell somewhat oblong-ovate, high, apex inclined anteriorly, radiately squamately ribbed, scales very short, rather distant; dark dull brown, interior bronze-chestnut.

MARTYN, Universal Conchology, vol. i. pl. 17.

Hab. Straits of Magellan; Cuming.

An elevately oblong-conical species, of a dull brown, rayed with bluntly scaled ribs, the scales being rather distant. The interior is chestnut-stained and of iridescent bronze.

October, 1854.

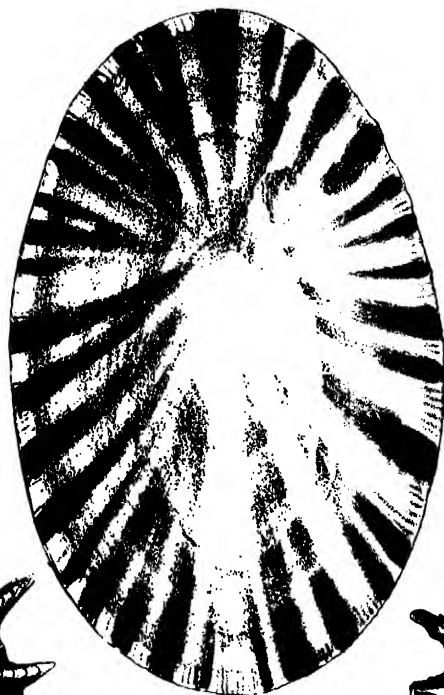
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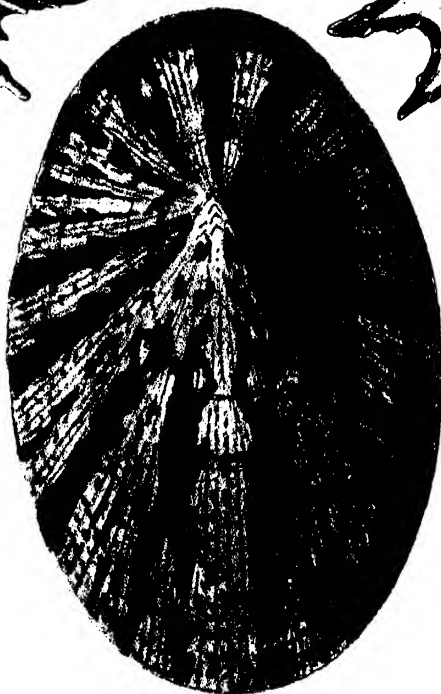
10a.



11a



11b



10b

PATELLA.

PLATE VI.

Species 10. (Fig. *a, b*, Mus. Cuming.)

PATELLA SANGUINANS. *Pat. testā oblongo-ovatā, convexiusculā, apice subantico, striis concentricis lirisque parvis superficialiis decussatā; albidā, hic illic peculiariter rugosā, strigis sanguineo-rufis promiscuè fluentibus lineatā, superficie rugosā rufo-punctatā, intus semipellucido-albā, conspicuè rufo-radiatā.*

THE BLEEDING LIMPET. Shell oblong-ovate, rather convex, apex rather anterior, decussated with concentric striae and small superficial ridges; whitish, here and there peculiarly rough, marked with promiscuously flowing blood-red streaks, rough surface red-dotted, interior semipellucid-white, conspicuously red-rayed.

Hab. Cape Natal, South Africa.

This fine new species is of an oblong-oval form, rather flattish, with the apex situated somewhat anteriorly. It is of a reddish-white ground, painted with promiscuous streaks of red, like blood flowing, and the ground is singularly overlaid here and there with an opaque rough coating dotted with red.

Species 11. (Fig. *a, b*, Mus. Cuming.)

PATELLA LONGICOSTA. *Pat. testā ovalā, anticè subattenuatā, depresso-convexā, costis duodecim fortissimis radiatā, costis paucis minoribus intermediis, omnibus carinatis; ferrugineo-nigrā, intus caeruleo-albā, nucleo pallidè vitellino, margine prominentè stellato-squamato, nigro-fimbriato.*

THE LONG-RIBBED LIMPET. Shell ovate, slightly attenuated anteriorly, depressly convex, rayed with twelve very strong ribs, with a few smaller intermediate ribs, all the ribs keeled; rust-black, interior bluish-white, with a pale yell nucleus, margin prominently stellately scaled, black-rayed.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vii. p. 528.

Patella gorgonica, Humphreys, MS.

Hab. — ?

This well-known species is chiefly remarkable on account of the very conspicuous star-like development of the ribs.

October, 1854.

21



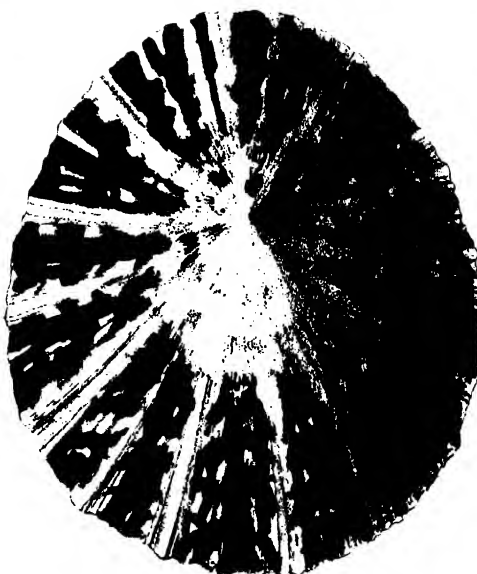
12 a



12 a



13 b



12 b

PATELLA.

PLATE VII.

Species 12. (Fig. *a, b*, Mus. Cuming.)

PATELLA CONSPICUA. *Pat. testā ovatā, anticē vix attenuatā, convexiusculā, subpellucidā, radiatim profusè sulcatā et striatā; cærulescente-albā, cærulescente-nigro promiscuè marmorato-radiatā, intus subargenteā, medio opaco-albā aut vitellinā, ad marginem conspicuè radiatā.*

THE CONSPICUOUS LIMPET. Shell ovate, scarcely contracted in front, slightly convex, subpellucid, radiately profusely grooved and striated; bluish-white, promiscuously mottle-rayed with blue-black, interior slightly silvery, opake-white or yelk in the middle, conspicuously rayed at the margin.

PHILIPPI, Abbild. und Besch. Conch. pl. 3. f. 1.

Hab. Mouth of the Gaboon, West Africa.

The dark rays which characterize this species are of quite a peculiar mottled style of colouring, and, the shell being of a subtransparent texture, they are seen very dis-

tinctly through it towards the margin. The inner central nucleus is sometimes yelk-yellow, sometimes marble-white.

Species 13. (Mus. Cuming.)

PATELLA COMPRESSA. *Pat. testā oblongā, altā, ad latera peculiariter compressā, undiquè radiatim striatā, striis obscurè remotè granulatis, tenuiculā; sordidè stramineā, subpellucidā, intus medio opaco-albā.*

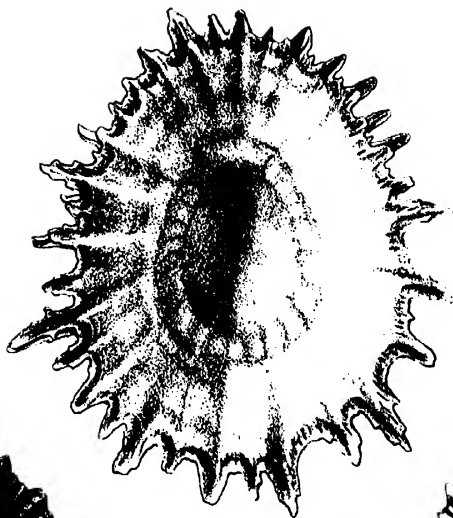
THE COMPRESSED LIMPET. Shell oblong, high, peculiarly compressed at the sides, everywhere radiately striated, striæ obscurely remotely granuled, rather thin; dingy straw-colour, subtransparent, interior opake-white at the middle.

LINNÆUS, Syst. Nat. (12th edit.) p. 1261.

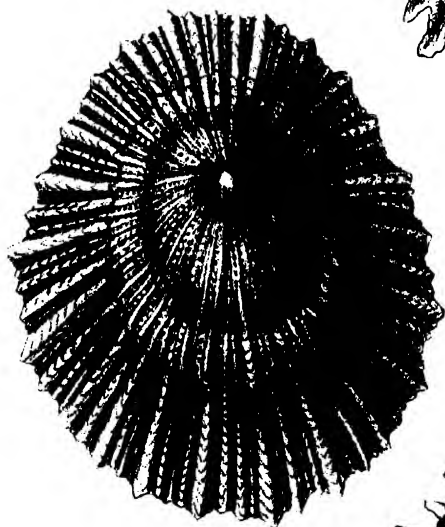
Hab. Cape of Good Hope.

A dingy straw-coloured subtransparent shell, rayed throughout with faintly knotted striæ, always singularly compressed at the sides.

October, 1854.



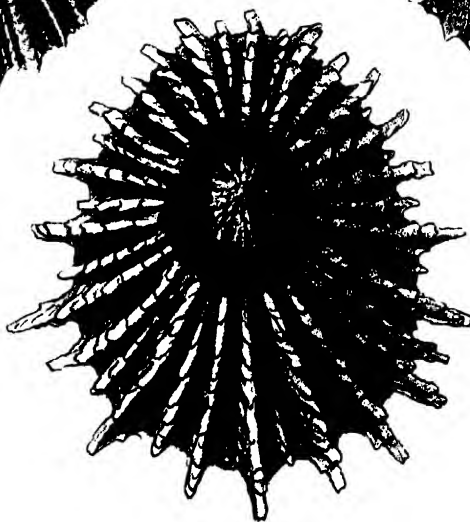
16a.



17a



17b



16b

PATELLA.

PLATE IX.

Species 16. (Fig. a, b, Mus. Cuming.)

PATELLA PLICATA. *Pat. testā ovatā, anticè subangustiore, parum convexā, rudè plicato-costatā, costis squamis cornutis rugosis profusè armatis; griseo-albā, nigro-cante marmoratā, intus nitente-albā, margine acutè elongato-squamatā.*

THE PLEATED LIMPET. Shell ovate, rather narrower anteriorly, but little convex, rudely plicately ribbed, ribs profusely armed with rough horned scales; greyish-white, marbled with pale black, interior shining white, sharply elongately scaled at the margin.

BORN, Mus. Test. Vindobonensis, pl. 18. f. 1.

Hab. Cape of Good Hope.

Chiefly distinguished by the rude scales of the ribs, which are very irregularly developed and mostly of a prolonged horn-like growth. The colour of the shell is generally an ash-mottled grey.

Species 17. (Mus. Cuming.)

PATELLA UMBELLA. *Pat. testā ovatā, anticè subattenuatā, radialim costatā, costis acutis, subrudibus, squamulatis, liris duabus minutis in interstitiis; subpellucido-albā, minio punctatā et strigatā, intus pellucido-albā, nucleo marmoreo-albo.*

THE LITTLE FAN LIMPET. Shell ovate, subattenuated in front, radially ribbed, ribs sharp, rather rude, finely scaled, with two minute ridges in the interstices; subtransparent-white, dotted and radially streaked with vermilion, interior transparent-white, with marble-white nucleus.

GMELIN, Syst. Nat. p. 3706.

Patella sanguinolenta, Gmelin.

Patella miniata, Born.

Hab. Cape of Good Hope.

Of transparent-white texture, rudely squamately ribbed, delicately streaked and spotted in the interstices between the ribs with bright scarlet-vermilion.

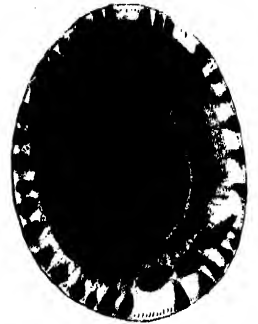
October, 1854.



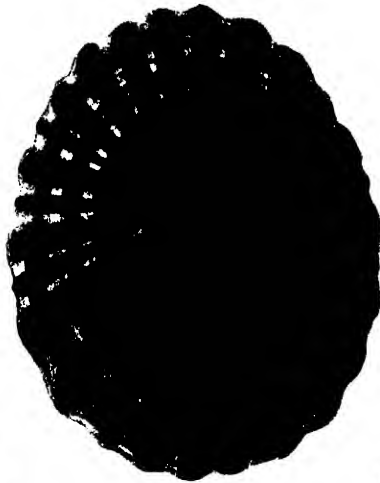
18a



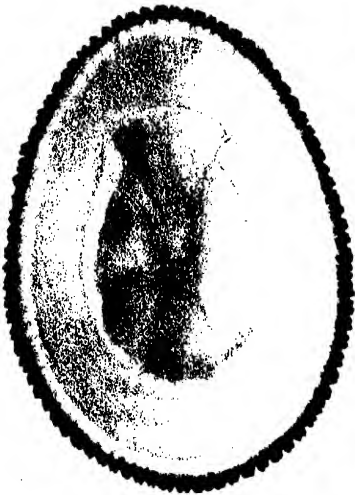
18b



18c



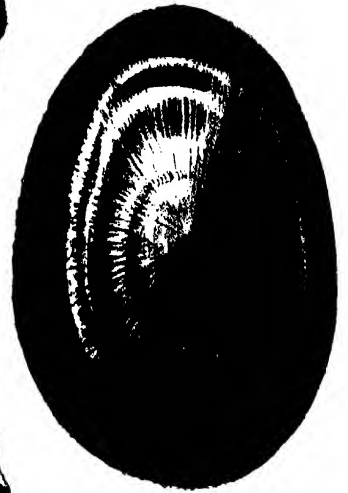
19a



20a



19b



20b

PATELLA.

PLATE X.

Species 18. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA VENOSA. *Pat. testā ovatā, convexā, aetate sub-
altā, antice subcontractā, in testā juniore radiatim cos-
tatā, costis parvis, subdistantibus, aetate plus minus
obsoletis, prope marginem varicosis; pellucido-albā,
castaneo-purpureo irregulariter venosā, venis ad margi-
nem bifurcatis, intus purpureo-castaneo intensè tinctā.*

THE VEINED LIMPET. Shell ovate, convex, rather high
with age, a little contracted in front, in the young
shell radiately ribbed, ribs small, rather distant, more
or less obsolete with age, varicose near the margin;
transparent-white, irregularly veined with chestnut-
purple, veins bifurcated at the margin, deeply stained
with purple-chestnut in the interior.

Hab. Isle of Chiloe, West Columbia; Cuming.

A transparent shell, gently radiately ribbed in the young
state, of transparent-white substance crossed with veins of
rich chestnut-purple. The veins are zigzag-biforked at
the margin; and the interior of the shell is richly stained
with the same colour, bronze-hued.

Species 19. (Fig. *a, b*, Mus. Cuming.)

PATELLA MAGELLANICA. *Pat. testā ovatā, pyramidal-
concaṽā, altissimā, radiatim costatā, costis latiusculis,
rudibus, obsolete retusè tuberculatis; cinereo-fuscā,
costis saturatioribus, nigro-maculatis, intus cinereo-
tinctā.*

THE MAGELLAN LIMPET. Shell ovate, pyramidally con-
cave, very high, radiately ribbed, ribs rather broad,
rude, obsoletely bluntly tubercled; ash-brown, ribs
darker, blotched with black, interior ash-tinged.

MARTINI, Conch. Cab. vol. i. pl. 5. f. 40 and 41.

Hab. Straits of Magellan; Cuming.

This species is distinguished chiefly by its lofty pyra-
midal cup-form, a character not discernible in our figure;
and it is rayed throughout with broad obtuse ribs ob-
scurely bluntly tubercled.

Species 20. (Fig. *a, b*, Mus. Cuming.)

PATELLA ARGENVILLII. *Pat. testā suboblongo-ovatā, an-
ticè paululum contractā, profundè convexā, radiatim
densè tenuiliratā, liris planulatis, crenulatis, alterna-
tim majoribus, interstitiis ad marginem bidenticulatis;
atrā, versus apicem plus minus erosā, intus marmoreo-
albā, ferrugineo-luteo tinctā, margine atrā.*

ARGENVILLE'S LIMPET. Shell somewhat oblong-ovate,
a little contracted in front, deeply convex, radiately
densely finely ridged, ridges flat, crenulated, alter-
nately larger, interstices bidenticulated at the mar-
gin; jet-black, more or less eroded towards the apex,
interior marble-white, tinged with rusty-yellow, black
at the edge.

KRAUSS, Südafrikanische Mollusken, p. 49.

Lepas écaillé, Argenville, Conch. vol. i. p. 504. pl. 3.
f. G.

Hab. Table Bay, South Africa.

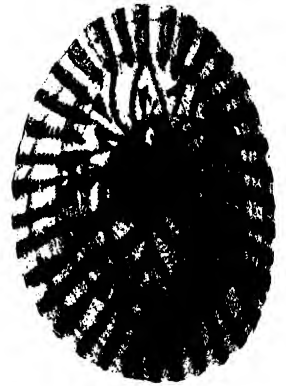
The sculpture of this shell consists of a number of
close-set sharp jet-black ridges inclined to be white in the
interstices, but more or less eroded towards the apex.
The margin is neatly set round with sharp denticles in
pairs.



21b



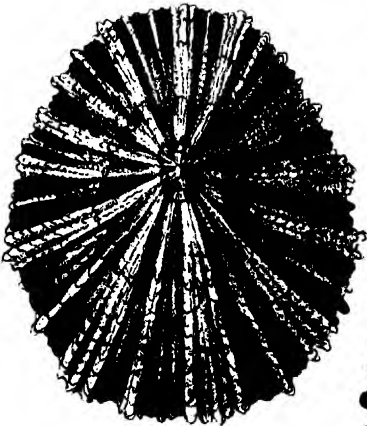
21a



22c



22a



22b



23b

PATELLA.

PLATE XI.

Species 21. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA VARICOSA. *Pat. testā suboblongo-ovatā, anticē paululum contractā, convexā, apice anticē inclinātā, radiatim costatā, costis latis, irregularibus, ferē obsoletis; virescente-albā, purpureo-castaneo tinctā et venosā, intus venosā et variegatā.*

THE VARICOSE LIMPET. Shell rather oblong-ovate, a little contracted in front, convex, apex inclined anteriorly, radiately ribbed, ribs broad, irregular, nearly obsolete; greenish-white, stained and veined with purple-chestnut, veined and variegated interior.

Hab. Tierra del Fuego; Cuming.

The painting of this shell, when not obscured by age, is very similar to that of *P. venosa* of the preceding plate. The form of the shell is a more oblong-oval, and the ribs of the surface are broad and almost obsolete.

Species 22. (Fig. *a, b*, Mus. Cuming.)

PATELLA VIDUA. *Pat. testā ovatā, convexiusculā, fortiter acutē costatā, costis alternatim minoribus, minutē squamatis, squamis distantibus, costā alternā interdum ferē obsoletā; ferrugineo-nigrā, apice erosā, intus albidā, fasciā latā ferrugineo-nigrā ad marginem, nucleo pallidē ferrugineo.*

THE WIDOW LIMPET. Shell ovate, moderately convex, strongly sharply ribbed, ribs alternately smaller, minutely scaled, scales distant, the alternate rib sometimes nearly obsolete, rusty-black, eroded at the apex,

interior whitish, with a broad rusty-black band at the edge, nucleus pale rust.

Hab. Island of Camiguin, Philippines.

A moderately convex shell, rayed with sharp ribs, alternately larger and smaller, each rib being roughened with minute somewhat distant scales; the chief characteristic of the species lies in its broad deep rust-black marginal border.

Species 23. (Fig. *a, b*, Mus. Cuming.)

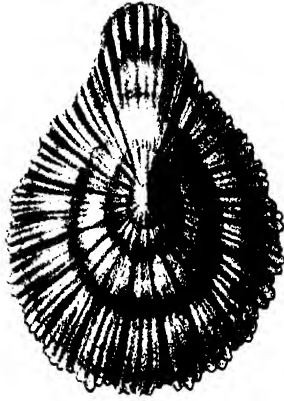
PATELLA ASPERA. *Pat. testā ovatā, suboctagonā, anticē paululum contractā, leviter convexā, variē irregulariter costatā, undique tenuiliratā, liris squamato-spinosis; albidā, ferrugineo vel atro variegatā, intus pellucido-albā, margine crenulatā.*

THE ROUGH LIMPET. Shell ovate, suboctagonal, a little contracted in front, slightly convex, variously irregularly ribbed, finely ridged throughout, ridges squamately spinose; whitish, variegated with rust or black, interior pellucid-white, crenulated at the margin.

LAMARCK, *Anim. sans vert.* (Deshayes' edit.) vol. vii. p. 529.

Hab. Madeira.

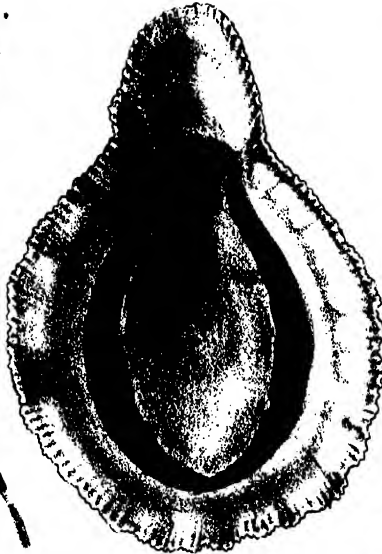
Of a suboctagonal form, but little convex, rudely irregularly ribbed and densely finely ridged, the ridges being profusely scale-spined.



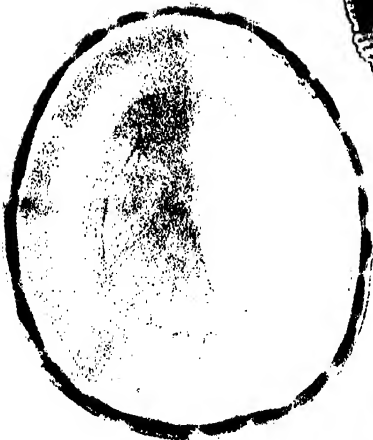
234



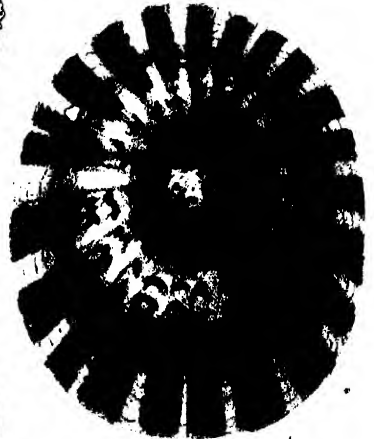
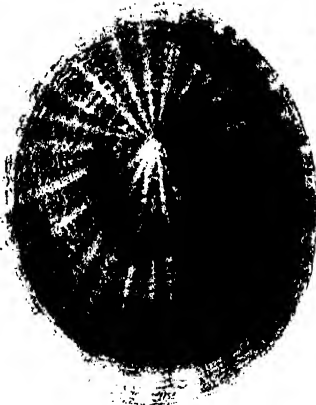
235



236



237



238

PATELLA.

PLATE XII.

Species 24. (Fig. a, b, Mus. Cuming.)

PATELLA COCHLEAR. *Pat. testā rotundato-ovata, parum convexa, anticē attenuato-productā et cochleariformi, radiatim plano-costatā, costis latis, acutē sulcatis; cærulescente-albā, intus cæruleiore, impressione musculari cæruleo-nigrā, margine crenulato.*

THE SPOON LIMPET. Shell rotundately ovate, but little convex, anteriorly attenuately produced and spoon-shaped, radiately flatly ribbed, ribs broad, sharply ridged; bluish-white, interior more blue, with the muscular impression blue-black, margin crenulated.

GMELIN, Syst. Nat. p. 3721.

Hab. Cape of Good Hope.

A very characteristic species, always distinguishable by its blue colouring and by the spoon-shaped prolongation of the anterior extremity.

Species 25. (Fig. a, b, Mus. Cuming.)

PATELLA RADIANS. *Pat. testā ovata, convexiusculā, apice anticē multō inclinato, radiatim costatā, costis rotundatis, subdistantibus, obsolete nodosis, anticis brevissimis; olivaceo-cinereā, costis plus minus nigris, interstitiis nigro alboque maculatis, intus sordidē cinereā, nucleo fulvo.*

THE RAYED LIMPET. Shell ovate, moderately convex, apex very much inclined anteriorly, radiately ribbed, ribs rounded, rather distant, obsoletely nodose, front ribs very short; olive-ash, ribs more or less black,

interstices blotched with black and white, interior dull ash, nucleus fulvous.

GMELIN, Syst. Nat. 13th edit. p. 3720.

Hab. New Zealand; Earl.

The apex of this species is unusually much inclined anteriorly. The entire surface is distinctly rayed with full cord-like ribs, black-stained, and sprinkled chiefly in the interstices with white spots.

Species 26. (Fig. a, b, c, Mus. Cuming.)

PATELLA VIRIDULA. *Pat. testā rotundato-ovata, subconoidē, undique peculiariter dense minutē indentatā, radiatim costatā, costis distantibus, planulatis, fere obsolete; flavescente-albā, viridi plus minus maculatā et punctatā, costis opaco-albo interstium punctatis, intus albā, margine viridi.*

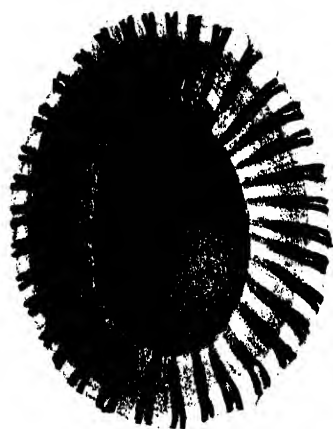
THE GREENISH LIMPET. Shell rotundately ovate, subconoid, everywhere peculiarly densely minutely indented, radiately ribbed, ribs distant, flattish, almost obsolete; yellowish-white, more or less blotched and dotted with green, ribs sometimes dotted with opaque-white, interior white, green at the edge.

LAMARCK, Anim. sans vert. vol. vii. p. 539.

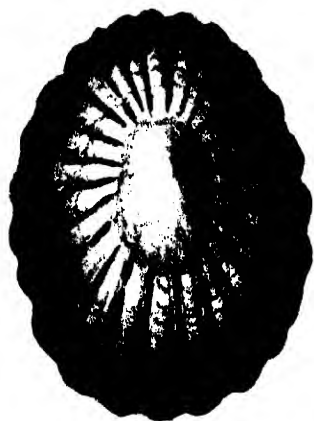
Patella Pretrei, D'Orbigny.

Hab. Coquimbo; Cuming.

Peculiarly finely indented throughout, and dotted and variegated with bright green.



27b



28b



PATELLA.

PLATE XIII.

Species 27. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA TRAMOSERICA. *Pat. testā ovatā, subconoidē, radiatim costatā, costis confertis, interdum obscure nodoso-tuberculatis, raro submuricatis; lutescente aut roseā, nigro radiatā, radiis albo maculatis, vel interstitiis omnino nigris, intus margine plus minus viridē coloratā.*

THE DRUGGET LIMPET. Shell ovate, subconoid, radiately ribbed, ribs close-set, sometimes obscurely nodosely tubercled, rarely a little prickled; yellowish or rose-tinged, rayed with black, rays white-spotted, or with the interstices altogether black, interior more or less brightly coloured at the margin.

MARTYN, Universal Conchology, vol. i. pl. 16.

Hab. Australia.

Distinctly coloured with black and yellow or black and scarlet, which shines through brightly into the interior at the margin.

Species 28. (Fig. *a, b*, Mus. Cuming.)

PATELLA CÆRULEA. *Pat. testā ovatā, convexiusculā, apice anticē subinclinato, radiatim costatā, costis rudibus, irregularibus, nunc grandibus, nunc parvis; virescente-cæruleā, purpureo-rufo versus marginem tinctā, intus pellucido-coloratā, nucleo opaco-albo.*

THE BLUE LIMPET. Shell ovate, moderately convex, the

apex a little inclined anteriorly, radiately ribbed, ribs rude and irregular, now large, now small; greenish-blue, tinged with purple-red towards the margin, interior transparently coloured, nucleus opaque-white.

LAMARCK, Anim. sans vert. (Deshayes' edit.) vol. vii. p. 531.

Hab. Teneriffe.

A delicate subtransparent rough-ribbed species, greenish-blue, tinged with purple-red towards the margin.

Species 29. (Mus. Cuming.)

PATELLA LIMBATA. *Pat. testā ovatā, subconoidē, radiatim costatā, costis rudibus, latis, plus minus indistinctis, nodulatis, obsolete muricatis; intense aurantiā, costarum interstitiis angustissimis nigris, intus margine aurantio nigro conspicuē maculato, nucleo cæruleo.*

THE EDGED LIMPET. Shell subconoid, radiately ribbed, ribs rude, broad, more or less indistinct, noduled, obsolete prickly; deep orange, interstices between the ribs very narrow, black, interior orange at the margin, conspicuously blotched with black, nucleus blue.

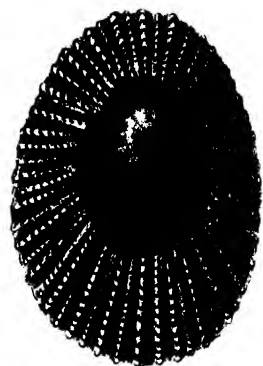
PHILIPPI, Abbild. und Besch. Conch. pl. 3. f. 1.

Hab. Signet Bay, North Australia; Dring.

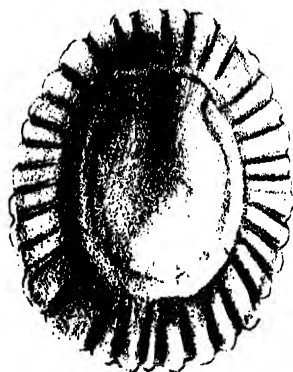
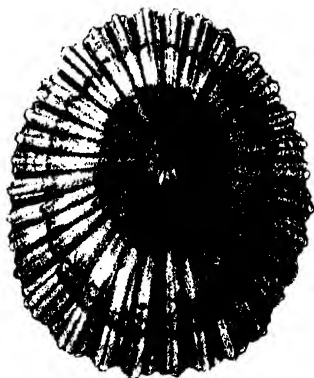
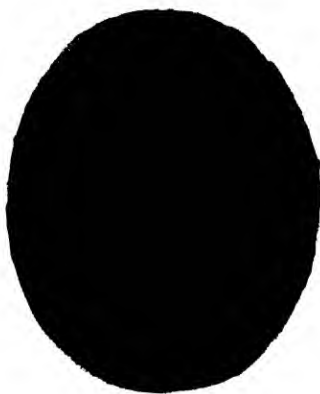
Closely allied to *P. tramoserica*, from the same locality, with the ribs broader and less distant from each other.

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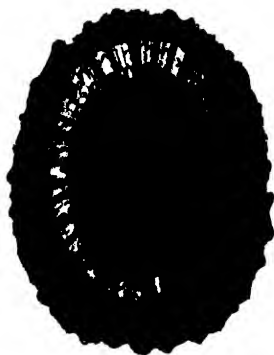
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34b



32b



32c

PATELLA.

PLATE XIV.

Species 30. (Fig. *a, b*, Mus. Cuming.)

PATELLA CLATHRATULA. *Pat. testā rotundato-ovatā, subconoidē, apice anticē subinclinato, liris subtilibus profusē radiali, striis concentricis clathratā; intus cinereo-olivaceā, immaculatā, intus pallidē olivaceo-cinereā, margine saturatiore, nucleo fulvo.*

THE FINELY LATTICED LIMPET. Shell rotundately ovate, subconoid, apex a little inclined anteriorly, profusely rayed with fine ridges, latticed with concentric striae; dark ash-olive, unspotted, interior light olive-ash, darker at the margin, nucleus fulvous.

Hab. Isle of Juan Fernandez; Cuming.

Of a regular conoid form, finely latticed throughout, and of a uniform dark cinder-olive colour.

Species 31. (Fig. *a, b*, Mus. Cuming.)

PATELLA GRANULARIS. *Pat. testā ovali, anticē paululum contractā, subconoidē, apice anticē leviter inclinato, densē radiatim liralā, liris irregularibus, plus minus prominentibus, nitidē squamato-imbricatis; nigricante-cinereā, squamis albis, intus latē fusco-marginatā, deinde caeruleo-nigra, nucleo rufo-castaneo, limbo hic illic albo denticulato.*

THE GRANULAR LIMPET. Shell ovate, a little contracted anteriorly, subconoid, apex slightly inclined in front, densely radiately ridged, ridges irregular, more or

less prominent, neatly squamately imbricated; blackish-ash, scales white, interior broadly brown-edged, then bluish, nucleus reddish-chestnut, edge denticulated here and there with white.

LINNÆUS, Syst. Nat. (12th edit.) p. 1258.

Patella denticulata, Martyn.

Hab. Cape of Good Hope.

Singularly characterized by a profusion of white prickly imbrications, upon a dull dirty ash-black ground.

Species 32. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA LUGUBRIS. *Pat. testā ovali, convexiusculā, apice anticē leviter inclinato, densē rudē costatā et liralā, et nodosē muricato-squamatā; sordidē albā, intus nigro tinctā et maculatā, intus fulco-albā vel plumbeo-ceruleā, margine latē serrato.*

THE MOURNFUL LIMPET. Shell ovate, moderately convex, apex slightly inclined anteriorly, densely rudely ribbed and ridged, and nodosely prickly-scaled; dull white, stained and blotched with intense black, interior fulvous-white or lead-blue, margin broadly serrated.

Hab. Island of St. Vincent's, West Indies.

An irregularly roughly ribbed shell, covered with short prickly-scaled nodules. Of a dull white ground, more or less stained and blotched with intense black.

(1)

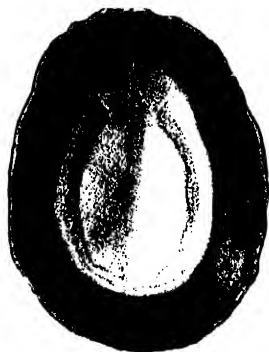
2000



.354



.356



PATELLA.

PLATE XV.

Species 33. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA DECORA. *Pat. testā ovalā, semigloboso-concavā, apice anticē multo inclinato, radiatim costatā, costis angustis, rotundatis, viz elevatis, distantibus, interstitiis undato-striatis, striis concentricis obsolete decussatis; virescente-olivaceā vel luteā, costis nigro vel sanguineo maculatis, intus pellucido-cinereā.*

THE COMELY LIMPET. Shell ovate, semiglobosely concave, apex much inclined anteriorly, radiately ribbed, ribs narrow, rounded, but little raised, distant, interstices wave-striated, obsoletely decussated with concentric striæ; greenish-olive or yellow, ribs blotched with black or blood-colour, interior transparent-ash.

PHILIPPI, Abbild. und Besch. Conch. pl. 2. f. 5.

Hab. New Zealand; Earl.

Of a peculiar semiglobose form, with the apex very much inclined to the anterior, rayed with ribs, blotched with black and blood-like gouts.

Species 34. (Fig. *a, b*, Mus. Cuming.)

PATELLA CANDEI. *Pat. testā ovalā, subconoidē, versus marginem leviter compressā, obsolete nodoso-clathratā, plerumque multo erosā, lineis concentricis albis undatis formantibus; intus extusque semipellucidē livido-olivaceā, nucleo albo.*

CANDEI'S LIMPET. Shell ovate, subconoid, slightly compressed towards the margin, obsoletely nodosely lat-

ticed, generally much eroded, forming concentric waved white lines; semitransparent livid olive within and without, nucleus white.

D'ORBIGNY, Moll. des Isles Canaries.

Hab. Canary Islands.

A semitransparent livid-olive shell, obsoletely nodosely latticed, but generally very much worn and eroded, leaving characteristic white waved lines.

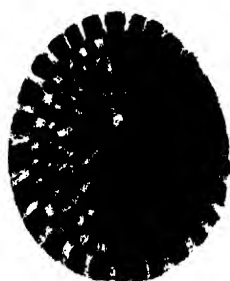
Species 35. (Fig. *a, b*, Mus. Cuming.)

PATELLA EXUSTA. *Pat. testā ovalā, anticē subattenuatā, planulato-concavā, subexpansā, apice anticē inclinato, radiatim costatā, costis, cum superficie, rudibus, irregularibus, obscure muricato-squamatis, interstitiis liris concentricis subdistantibus obsolete clathratis; ustulato-nigrā, rufo-tinctā, intus marmoreo-albā, margine remote denticulato, purpureo-nigro.*

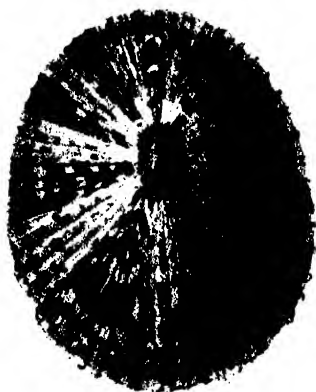
THE BURNT LIMPET. Shell ovate, a little attenuated in front, flatly convex, rather spread, apex inclined anteriorly, radiately ribbed, ribs (with the surface) rude, irregular, obscurely prickly-scaled, interstices obsoletely latticed with rather distant concentric ridges; burnt-black, red-tinged, interior marble-white, edge remotely denticulated, purple-black.

Hab. — ?

An extremely characteristic species, marble-white within, reddish-burnt black without, but of singular rude irregular obsoletely latticed sculpture.



377



386



391

PATELLA.

PLATE XVI.

Species 36. (Fig. a, b, c, Mus. Cuming.)

PATELLA VARIEGATA. *Pat. testā orbiculari-ovatā, subacuminato-convexā, anticē paululum inclinatā, radiatim granoso-liratā, granis obtusis, valdē irregularibus; lutescente, nigro-purpureo interruptē radiatā et maculatā, intus obscurē semipellucidā, argenteo-iridescente.*

THE VARIEGATED LIMPET. Shell orbicularly ovate, subacuminately convex, a little inclined anteriorly, radiately granosely ridged, grains obtuse, very irregular; yellow, interruptedly rayed and blotched with very dark purple, obscurely semitransparent within, silvery iridescent.

REEVE, Conch. Syst. vol. ii. pl. 136. f. 1.

Hab. Australia.

A rather acuminately raised shell, roughly bluntly granuled, marked with numerous spots and broken blotched rays of very dark purple.

Species 37. (Mus. Cuming.)

PATELLA CUMINGII. *Pat. testā orbiculari-ovatā, subdepresso-convexā, anticē leviter attenuatā et inclinatā, liris tenuibus confertim radiatā, in juniore striis concentricis eleganter decussatā; lutescente aut virescente-albā, intensē viridi densē tessellatim tinctā, intus cærulescente-albā, margine lato maculato.*

CUMING'S LIMPET. Shell orbicularly ovate, rather depressly convex, slightly attenuated and inclined ante-

riorly, closely rayed with fine ridges, in the young shell elegantly cancellated with concentric striae; yellowish or greenish-white, densely tessellately mottled with dark green, interior bluish-white, with a broad mottled border.

Hab. Valparaiso; Cuming.

A very dark green and yellowish-white mottled shell, rather depressly convex, characterized internally with a conspicuous broad mottled border. It is closely allied to the *P. diaphana*, Nuttall, from Mazatlan.

Species 38. (Mus. Cuming.)

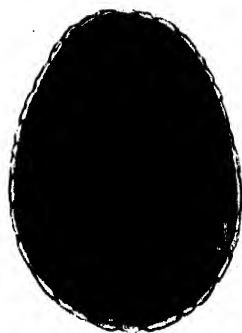
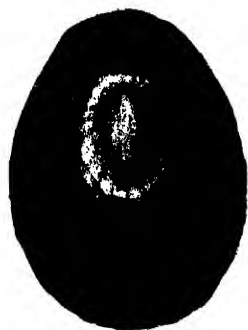
PATELLA CLYPEATER. *Pat. testā depresso-orbiculari, tenuiculā, densē radiatim liratā, liris irregularibus, obsoletē tuberculato-undatis, ferrugineo-fusco pulcherrimē tinctā et maculatā, intus argenteo-iridescente, medio viridē purpureo-ferrugineā.*

THE SHIELD LIMPET. Shell depressly orbicular, rather thin, densely radiately ridged, ridges regular, obsoletely tubercularly waved, very beautifully stained and mottled with rust-brown, interior silvery iridescent, bright purple-rust in the middle.

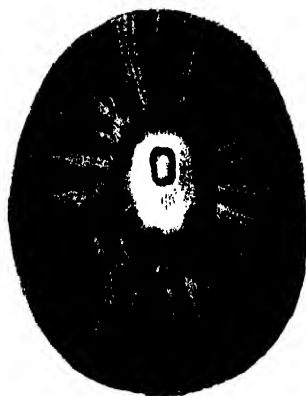
LESSON, Zool. Voy. de la Coquille, p. 419.

Hab. Monterey, Lower California; Hartweg.

A rather thin subdepressed species, profusely stained and dotted with copper-rust-brown, the interior being brilliantly silvery iridescent.



30b



31b



30c

PATELLA.

PLATE XVII.

Species 39. (Fig. a, b, c, Mus. Cuming.)

PATELLA ROTA. *Pat. testâ depresso-ovatâ, anticè subattenuatâ, radiatim rugoso-striatâ vel liratâ, liris in testâ juniore oblongo-granatis, deinde obsolete; lutescente-albâ vel plumbeâ, purpureo-fusco remotè radiatâ, intus argenteo-cornèâ, medio interdum aurantio-rufâ.*

THE WHEEL LIMPET. Shell depressly ovate, anteriorly subattenuated, radiately roughly striated or ridged, ridges in the young shell oblong-grained, then obsolete; yellowish-white or lead-colour, distantly rayed with purple-brown, interior silvery horny, sometimes orange-red in the middle.

CHEMNITZ, Conch. Cab. vol. x. p. 330. pl. 168. f. 1619.
Hab. Suez, Mozambique.

Extremely variable in distinctness of character, the rays in most specimens being almost obsolete.

Species 40. (Mus. Cuming.)

PATELLA FERRUGINEA. *Pat. testâ oblongo-ovatâ, anticè subattenuatâ et multo inclinatâ, profundè elevato-converâ, interdum subcompressâ, obsolete undato-liratâ, liris subdistantibus, lineis concentricis densè circumdatâ; ferrugineo-cinereâ, intus intensè æruginèo-fuscâ.*

THE FERRUGINOUS LIMPET. Shell oblong-ovate, a little attenuated and much inclined in front, deeply elevatedly convex, sometimes a little compressed, obso-

letely wave-ridged, ridges rather distant, densely encircled with concentric lines; ferruginous ash, deep bronze-brown within.

SOWERBY (Mus. Cuming).

Patella Delessertii, Philippi.

Hab. —?

A subcompressed deeply raised shell, obscurely ash-stained without, and of a rich dark bronze-brown within.

Species 41. (Mus. Cuming.)

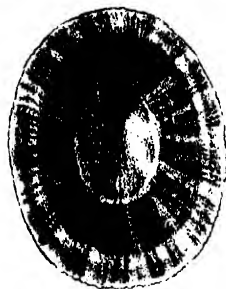
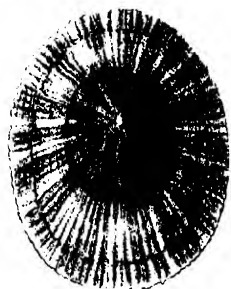
PATELLA ATRAMENTOSA. *Pat. testâ ovatâ, utrinque subattenuatâ, elevatâ, crassiusculâ, rudè obtuso-costatâ, costis irregularibus, obsolete tuberculatis; albidâ, atrorufâ profusè fluente, intus argenteo-luteâ, æruginèo-fusco tinctâ, margine dentato, nigro-maculato.*

THE INKY LIMPET. Shell ovate, rather attenuated at both ends, raised, rather thick, rudely bluntly ribbed, ribs irregular, obsolete tubercled; whitish, broadly profusely flowing with jet-black, interior silvery yellow, stained with bronze-brown, margin denticulated, black-spotted.

Hab. Cape Horn.

A raised attenuately ovate species, with a characteristic painting of broad flowing ink-streaks, white appearing in the interstices at irregular distances.

December, 1854:



244

PATELLA.

PLATE XVIII.

Species 42. (Fig. a, b, c, Mus. Cuming.)

PATELLA VULGATA. *Pat. testā ovatā, subprofundē convexā, apice subcentrali, radiatim striatā vel costatā, costis interdum squamato-spinosis; cinerā vel lutescent-olivaceā, obscure radiatā, spinis albidis, intus livido-olivaceā.*

THE COMMON LIMPET. Shell ovate, rather deeply convex, apex nearly central, radiately striated or ribbed, ribs sometimes squamately spined; greyish or yellow-olive, obscurely rayed, spines white, interior livid-olive.

LINNÆUS, Syst. Nat. (12th edit.) p. 1258.

Patella depressa, Pennant.

Patella vulgaris, Da Costa.

Hab. Atlantic shores of Europe.

This well-known species is curiously varied in sculpture, but not differing materially in colour. Sometimes it is smooth or gently striated, and sometimes ribbed and minutely scale-spined.

Species 43. (Mus. Cuming.)

PATELLA NIGRO-LINEATA. *Pat. testā suboblongo-ovatā, anticē subattenuatā et multō inclinatā, tenuiculā, depressiusculā, radiatim liratā, liris obtusis, subdistantibus, alternis medio terminalibus; cinereo-nigricante, ad apicem pallescente, liris intensè nigris, intus nigrescente-caruleā, nucleo ustulato-fuscescente.*

THE BLACK-LINED LIMPET. Shell rather oblong-ovate, slightly attenuated and much inclined anteriorly,

thinnish, rather depressed, radiately ridged, ridges obtuse, rather distant, the alternate ones terminating about the middle; cinder-black, pale at the apex, ridges deep black, interior blackish-blue, nucleus burnt-brown.

Hab. Island of Camiguin, Philippines; Cuming.

A rather thin cinder-black shell, conspicuously rayed with blunt scarcely rayed black ridges, bluish in the interior, with a characteristic light burnt-brown nucleus.

Species 44. (Mus. Cuming.)

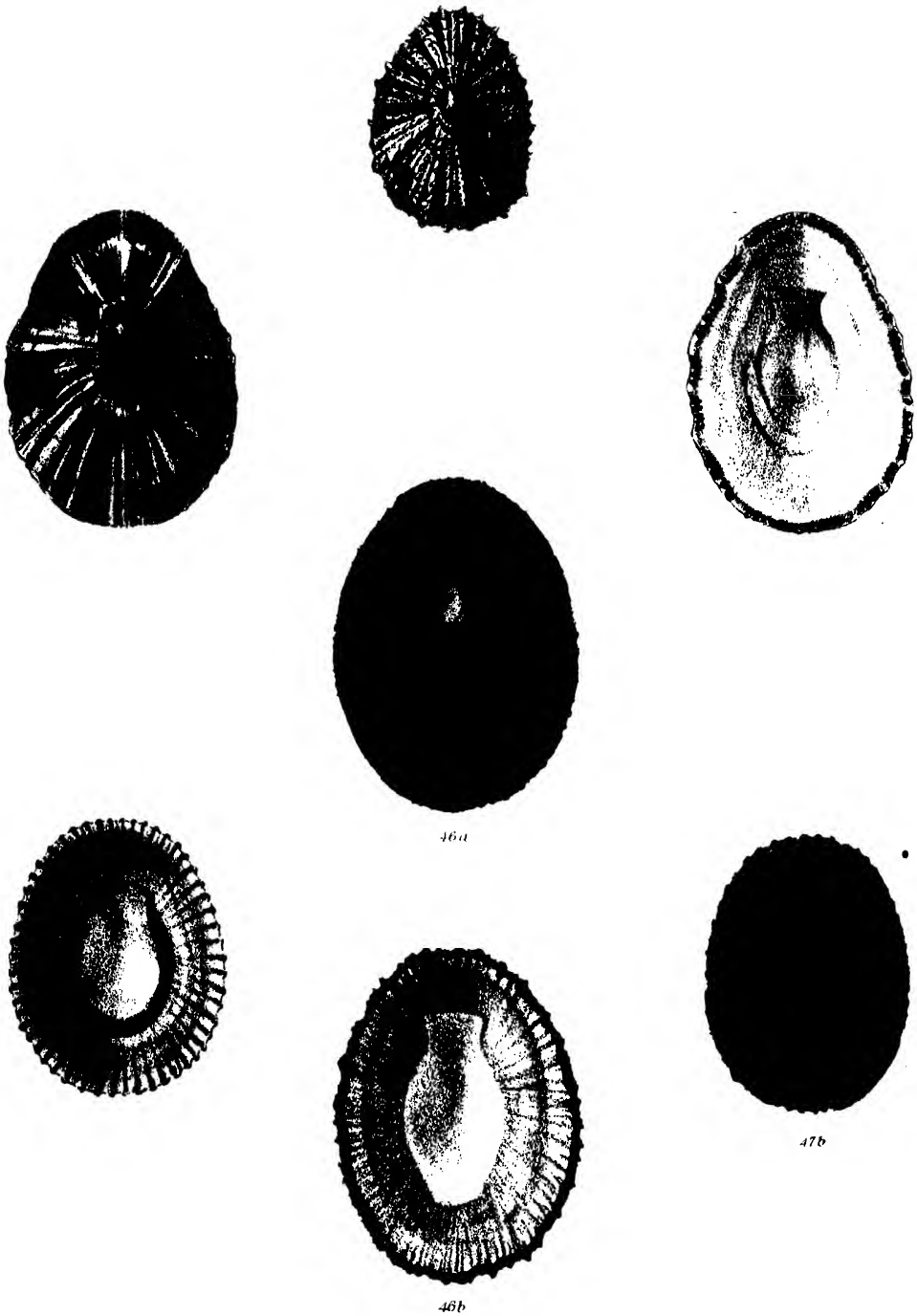
PATELLA ENNEAGONA. *Pat. testā ovatā, anticē subattenuatā et inclinatā, depressā, crassiusculā, apice obtusā, densè crenulato-liratā, peculiariter enneagonā, areis tribus anticis angustis; lutescente, areis novis intensè purpureo diagonaliter reticulato-strigatis, intus argenteo-iridescente.*

THE NINE-SIDED LIMPET. Shell ovate, a little attenuated in front, depressed, rather thick, obtuse at the apex, subattenuated and inclined, densely crenulately ridged, peculiarly nine-sided, the three front areas narrow; yellowish, the nine areas diagonally reticulately streaked with deep purple, interior silvery iridescent.

Hab. — ?

This very characteristic species is divided on the surface into nine distinct areas, of which the three front are smaller than the rest; and the diagonal net-striped painting appears in the areas only.





PATELLA.

PLATE XIX.

Species 45. (Mds. Cuming.)

PATELLA PICA. *Pat. testā ovatā, anticē acuminatā, sub-cochleariformi, depressā, medio elevatā, radiatim rudē liratā et costatā, muricatō-squamulā, squamis ætate plus minus obsoletis; fulvescente-albā, nigro variē pictā, intus albicante, flavido-fusco tinctā, margine denticulato, picato.*

THE PIED LIMPET. Shell ovate, acuminate in front, somewhat spoon-shaped, depressed, raised in the middle, radiately rudely ridged and ribbed, prickly scaled, scales more or less obsolete with age; fulvous-white, variously pied with black, interior white, tinged with yellowish-brown, margin denticulated, pied.

Hab. South Seas.

A characteristic spoon-shaped shell, rudely prickly ridged and ribbed, yellowish-white, promiscuously blotched with positive black.

Fig. 46. (Mus. Cuming.)

This shell is the young of *P. plumbea*, represented at

Plate 11., which it is important to figure, as showing the sharper and more crenated structure of the ridges.

Species 47. (Mus. Cuming.)

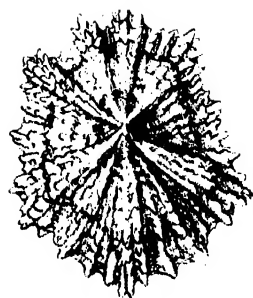
PATELLA EXARATA. *Pat. testā rotundato-ovatā, elevatā, apice anticē leviter inclinatā, radiatim liratā, liris distinctis, subremotis, irregularibus, rotundatis, tenuē confertim crenatis; pallidē fulvā, subpellucidā, liris cæruleo-nigricantibus, opacis, intus argenteo-iridescente, medio cærulescente-lactē.*

THE PLOUGHED LIMPET. Shell rotundately ovate, raised, slightly anteriorly inclined at the apex, radiately ridged, ridges distinct, rather distant, irregular, rounded, finely closely crenated; pale fulvous, subpellucid, ridges blue-black, opaque, interior silvery iridescent, milky-blue towards the middle.

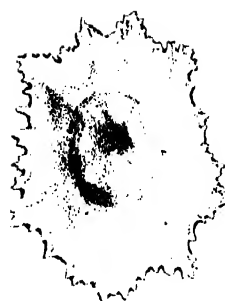
NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Oregon, California; Lieutenant Baskerville.

A light silvery shell, rayed with conspicuously defined, blue-black, closely crenated, rounded ridges.



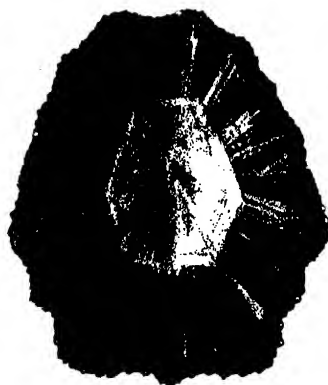
286



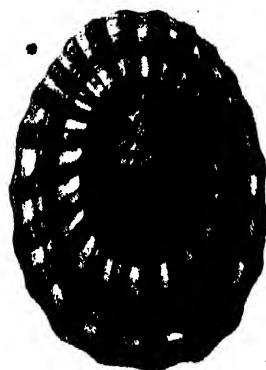
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288



289



290

PATELLA.

PLATE XX.

Species 48. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA PENTAGONA. *Pat. testā ovatā vel pentagonā, valde irregulari, nunc depressā, nunc elevatā, costis octo vel novem radiatā, costis rariē tuberculatis et squamatis, interstitiis rugoso-clathratis; albā, nigro plus minus picatā, medio aurantio tinctā.*

THE FIVE-SIDED LIMPET. Shell ovate or five-angled, very irregular, sometimes depressed, sometimes raised, rayed with eight or nine ribs, ribs variously tubercled and scaled, interstices wrinkle-latticed; white, more or less pied with black, orange-stained in the middle.

BORN, Mus. Test. Viindobouensis.

Patella stellaformis, Reeve (in Conch. Syst.).

Hab. Elizabeth Island, South Seas, and Philippine Islands.

Remarkable for its irregular growth, and white, tubercled, rudely wrinkled, sculptured, more or less pied in the interstices with black.

Species 49. (Mus. Cuming.)

PATELLA SCUTELLARIS. *Pat. testā subhexagono-ovatā, antice parvulum attenuatā, depressā, tenuiculā, radia-*

tim costatā, costis distantibus, subobsoletis, interstitiis dense tenuiliratis et striatis, minutē crenulatis; olivaceo-ceruleā, costis versus apicem pallidioribus, intus pellucido-griseā.

THE DISH LIMPET. Shell somewhat hexagonally ovate, a little attenuated in front, depressed, rather thin, radiately ribbed, ribs distant, rather obsolete, interstices densely finely ridged and striated, minutely crenulated; olive-blue, ribs paler towards the apex, interior transparent grey.

LAMARCK, Anim. sans vert. (Deshayes edit.) vol. vii. p. 532.

Hab. Bay of Naples.

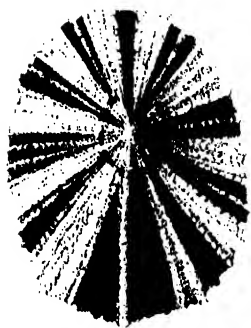
A transparent olive-grey is the prevailing colour of this species, but it is variable.

Fig. 50. (Mus. Cuming.)

This shell proves to be *P. redimicula*, represented at Plate XII. in an earlier stage of growth, when the interior is less coated with opake lining, and has a more transparent tortoise-shell appearance. It has been attributed to *P. radians*, Gmelin, but like many other species of this author, it rests on doubtful evidence.

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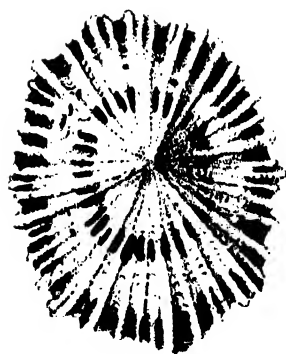
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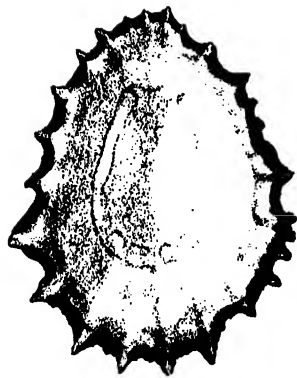
33 k



33 a



33 b



PATELLA.

PLATE XXI.

Species 51. (Fig. *a, b, c*, Mus. Cuming.)

PATELLA BONNARDI. *Pat. testā ovatā, subacutē convexā, apice subanticā, costis lirisque acutē compressis densē radiatā, squamis concentricis decussatā; albā, nigro vel fusco radiatā, intus subpellucido-albā.*

BONNARD'S LIMPET. Shell ovate, rather sharply convex, subanterior at the apex, profusely rayed with sharply compressed ribs and ridges, decussated with concentric scales; white, rayed with black or brown, interior subtransparent white.

PAYRAUDEAU, Cat. Moll. de Corse, p. 89, pl. 3. f. 9-11.

Hab. Mediterranean.

A sharply convex shell, rayed with numerous compressed squamate ribs and ridges; white rayed with black or rust-

squamately tubercled; deep purple-black, here and there white-eroded, interior milk-white, margin sharply denticulated, purple-black.

Hab. -

A very depressed rudely constructed species, strongly rayed with rough irregular bluntly scaled ribs, deep purple-black except where promiscuously white-eroded.

Species 53. (Mus. Cuming.)

PATELLA CRETACEA. *Pat. testā ovatā, subdepressā, radiatim densē costatā, costis purpureis, compressis aut tumidiusculis, obsolete squamatis, valdē irregularibus; cretaceo-albā, purpureo-nigro hic illic sparsim maculatā, intus albā, margine denticulato, purpureo-nigro tenuē limbatō.*

THE CHALK LIMPET. Shell ovate, rather depressed, radiately densely ribbed, ribs rather small, compressed or swollen, obsoletely squamate, very irregular; chalk-white, here and there sparingly blotched with purple-black, interior white, margin denticulated, thinly edged with purple-black.

Hab. Tahiti.

Allied to the preceding species, though of a perfectly distinct character, more truly ovate, with the ribs more numerous and irregular, and less stained with purple-black.

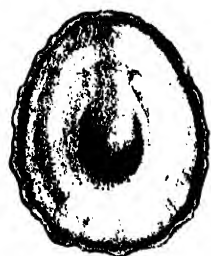
Species 52. (Mus. Cuming.)

PATELLA CHITONOIDES. *Pat. testā ovatā, anticē acuminatā, valdē depressā, crassiusculā, irregulariter radiatim costatā, costis acutis, rudibus, plus minus obsolete squamato-tuberculatis; intensē purpureo-nigrā, hic illic albo-erosā, intus lacteā, margine acutē denticulato, purpureo-nigro.*

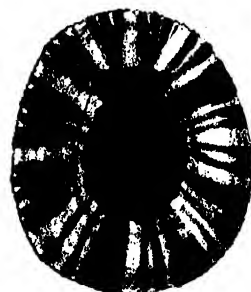
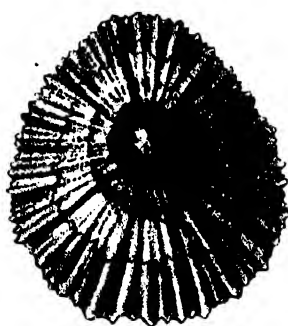
THE CHITON-LIKE LIMPET. Shell ovate, acuminate in front, very depressed, rather thick, irregularly radiately ribbed, ribs sharp, rude, more or less obsoletely



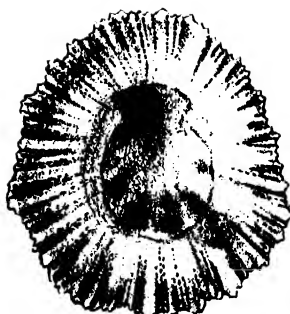
54a



55b



56b



55a

PATELLA.

PLATE XXII.

Species 54. (Fig. a, b, c, Mus. Cuming.)

PATELLA PUNEBRIS. *Pat. testā ovatā, anticē subattenuatā, elevato-convexā, levigatā, costis tuberculatis radiatā, tuberculis tumidis, interdum subdistantibus; sordide nigrā, ad apicem ferrugineo-albā, intus opaco-albā, interdum ferrugineo tinctā.*

THE MOURNING LIMPET. Shell ovate, slightly attenuated in front, elevately convex, smooth, rayed with tubercled ribs, tubercles swollen, sometimes rather distant; dull black, rusty-white at the apex, interior opaque white, sometimes rust-tinged.

Hab. —?

A very characteristic dull black species, smooth, but rayed with tubercularly noded rather distant ribs.

Species 55. (Mus. Cuming.)

PATELLA ELECTRINA. *Pat. testā orbiculari, anticē attenuatā, subdepressā, apice acutā, radialim dense liratā, liris rudibus, irregularibus, obtusē squamatis; pallide fulvā, circa apicem et inter liras ferrugineā, intus pellucido-albā.*

THE AMBER LIMPET. Shell orbicular, attenuated in

front, rather depressed, sharp at the apex, radiately densely ridged, ridges rough, irregular, bluntly squamate; light fulvous, rusty about the apex and between the ridges, interior transparent white.

Hab. Australia.

Of a subtransparent texture, stained with amber rust about the apex and between the ridges, the colour showing conspicuously through in the interior.

Species 56. (Mus. Cuming.)

PATELLA PETALATA. *Pat. testā ovatā, subdepressā, obsolete cancellato-liratā; pellucido-flavicante, radiis latis nigricante-purpureis pictā, intus pellucido-cornē, nucleo castaneo-purpureo.*

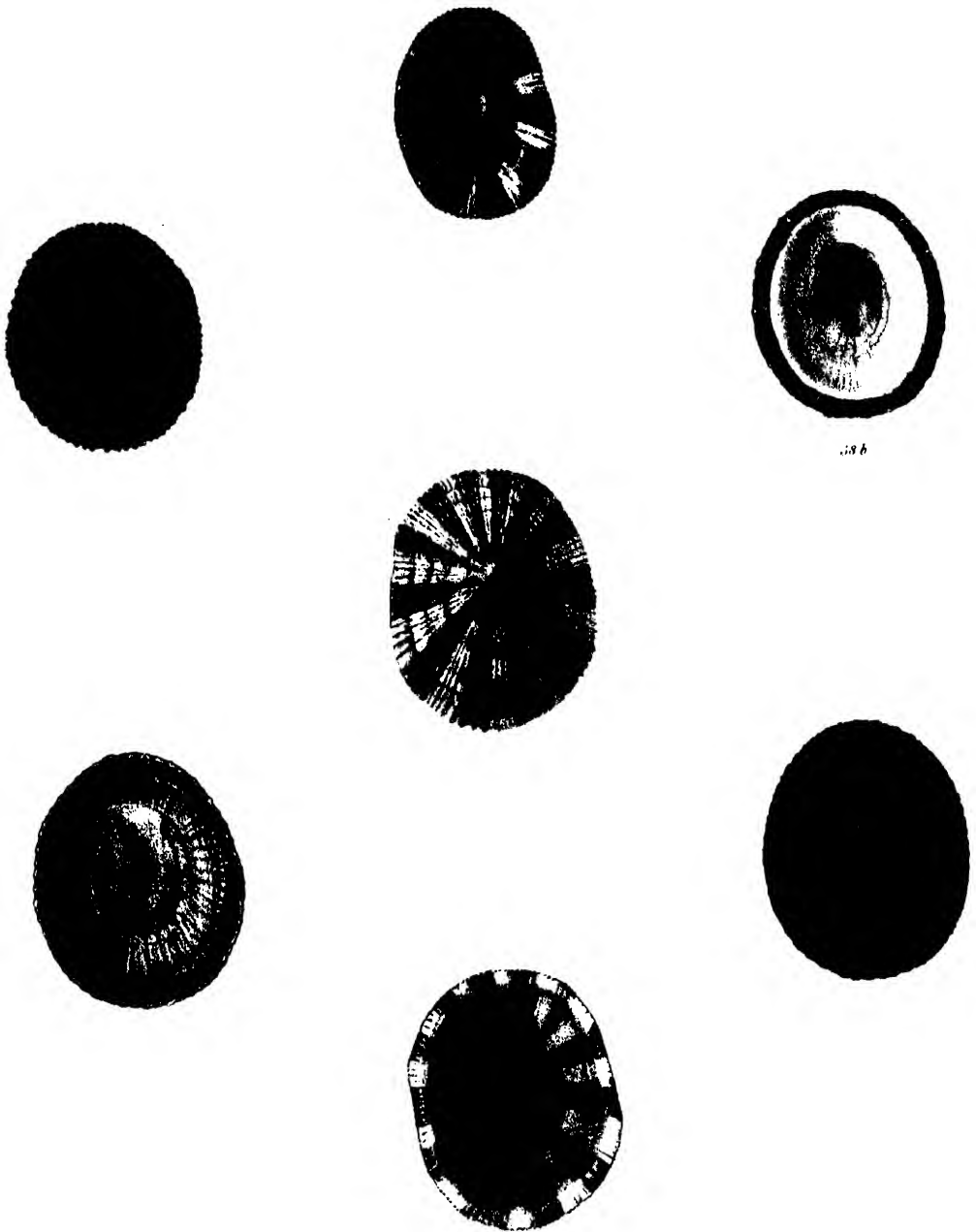
THE PETALOID LIMPET. Shell ovate, rather depressed, obsoletely cancellately ridged; transparent yellow, painted with broad blackish-purple rays, interior transparent horny, nucleus chestnut-purple.

Hab. Australia.

A semi-transparent yellow horny shell, conspicuously painted with broad, rich, blackish-purple rays; which are sometimes a little broken up.

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58 b

PATELLA.

PLATE XXIII.

Species 57. (Fig. a, b, c, Mus. Cuming.)

PATELLA NIGRO-PUNCTATA. *Pat. testā ovatā, elevato-convexā, ad apicem submucronatā, radiatim rugoso-liratā; sordide cinereā, pallide carneo tincta, obscure latiradiatā, liris punctis nigris oblongis gemmatis, intus fulvo-cinereā, interdum conspicuè olivaceo radiatā.*

THE BLACK-DOTTED LIMPET. Shell ovate, elevately convex, rather pointed at the apex, radiately rugosely ridged; dull ash-colour, pale flesh-tinted, obscurely broadly rayed, ridges beaded with oblong black dots, interior fulvous-ash, sometimes conspicuously olive-rayed.

Hab. Cascaes Bay, Portugal.

A raised subacuminately convex species, rayed in a very characteristic manner with oblong black bead-like dots.

Species 58. (Mus. Cuming.)

PATELLA STRIATA. *Pat. ovato-orbiculari, peculiariter compresso-depressā, apice minuto, anticè inclinatā, liris tenuibus funiculatis subirregulariter densè radiatā; nigrā, maculis parvis albis interdum indistinctè radiatā, intus cærulescente-albā, medio fuscescente tinctā, margine nigro latè limbato.*

THE STRIATED LIMPET. Shell ovately orbicular, peculiarly compressly depressed, with the apex minute, inclined anteriorly, somewhat irregularly densely

rayed with thin cord-like ridges; black, sometimes faintly rayed with distant small white spots, interior bluish-white, stained with brown in the middle, margin broadly edged with black.

Patelloida striata, Quoy, Voy. de l'Astrolabe, vol. iii. p. 353. pl. 71. f. 8-11.

Hab. Philippine Islands; Cuming.

Of a peculiar convexly depressed form, with a very small apex, rayed with numerous fine corded ridges, black, obscurely rayed with white spots, unusually broadly black-bordered on within.

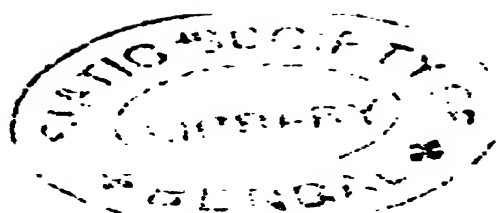
Species 59. (Mus. Cuming.)

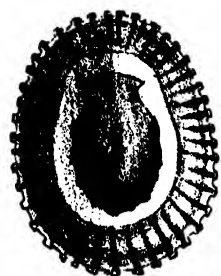
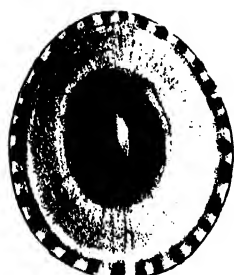
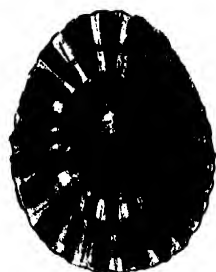
PATELLA UNDATO-LIRATA. *Pat. testā ovatā, subacutè convexā, versus apicem anticè subinclinatā, profusè lirata, liris tenne crenulatis et peculiariter undulatis, cærulescente-plumbeā, intus eodem colore, subiridescente.*

THE WAVE-RIDGED LIMPET. Shell ovate, rather sharply convex, a little inclined anteriorly towards the apex, profusely ridged, ridges finely crenulated and peculiarly waved, bluish lead-colour, interior the same colour, rather iridescent.

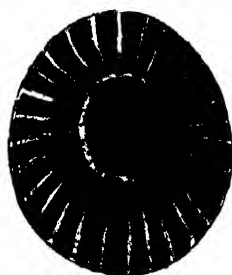
Hab. Sandwich Islands; Dr. Newcombe.

In form this species is sharply convex, inclined anteriorly towards the apex, from which point it is rayed with numerous thinly waved ridges. In colour it is within and without of a bluish-lead.





ex b



ex b

PATELLA.

PLATE XXIV.

Species 60. (Mus. Cuming.)

PATELLA CINIS. *Pat. testā ovatā, anticè subattenuatā, subacutè elevato-convexā, striis costisque latis retusis radiatā, costis interdum ferè obsoletis; cinereo-nigrā, strigis albidis undatis nebulatis ornatā, intus nilente-albā, nucleo intensè castaneo, parvo.*

THE CINDER LIMPET. Shell ovate, a little attenuated in front, rather sharply elevately convex, rayed with striae and broad retuse ribs, ribs sometimes almost obsolete; cinder-black, marked with clouded waved white streaks, interior shining white, nucleus deep chestnut, small.

Hab. Monterey, Lower California; Hartweg.

The colouring of this species is a streaked pattern of faint bluish-white waves upon a dark cinder-black ground.

Species 61. (Mus. Cuming.)

PATELLA DIAPHANA. *Pat. testā ovatā, anticè subattenuatā, depressā, profusè tenuilimatā, liris plus minus*

indistinctè granulatis; olivaceo-viridi, lutescente-albo peculiariter radiatā et variegatā, intus diaphano-virescente, ad marginem latè marmoratā.

THE DIAPHANOUS LIMPET. Shell ovate, slightly attenuated in front, depressed, profusely finely ridged, ridges more or less indistinctly granuled; olive-green, peculiarly rayed and variegated with yellowish-white, interior diaphanous green, broadly mottled at the margin.

NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Upper California; Nuttall. Central America; Cuming, Hinds, Kellett.

Distinguished by a peculiar diaphanous green colouring, more or less densely variegated and mottled exteriorly with yellowish-white.

Fig. 62. (Mus. Cuming.)

A variety of *P. exarata*, described at Plate XIX., more distinctly ridged.

December, 1854.

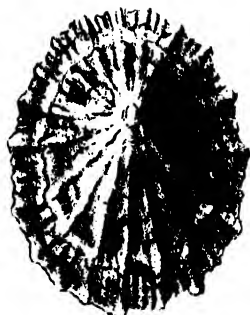
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65 b



64 b

PATELLA.

PLATE XXV.

Species 68. (Fig. a, b, c, Mus. Cuming.)

PATELLA VARIABILIS. *Pat. testā ovatā, depressissimā, irregulari, extus rudē lirata et plus minus erosā, interdum virescente, punctis nigris undatis radiatā; intus cærulescente, medio castaneo-lineatā, peculiariter variè lineatā et lentiginosā, margine latè planulato, interruptè lineato.*

THE VARIABLE LIMPET. Shell ovate, very depressed, irregular, externally rudely ridged, and more or less eroded, sometimes greenish, rayed with waved black dots; interior bluish, sometimes stained with chestnut in the middle, peculiarly variously lineated and speckled, margin broadly flattened, interruptedly lineated.

SOWERBY, Zool. Beechey's Voyage, p. 147. pl. 39. f. 5 (not f. 3 or f. 4).

Hab. Valparaiso; Cuming.

This species is very depressed and irregular, peculiarly marked in the interior with dark promiscuous lines, or chestnut curiously speckled with yellow.

Species 64. (Mus. Cuming.)

PATELLA MORBIDA. *Pat. testā ovatā, rudē depressā, medio rotundato-elevatā, radiatim fimbriato-costatā, plus minus erosā, liris obsolete brevispinosis; intus luteo-albā; nigro plus minus irregulariter inquinatā, extus ferrugineo-erosā.*

THE DISEASED LIMPET. Shell ovate, rudely depressed, rotundately raised in the middle, radiately fimbriately ridged, more or less eroded, ridges obsoletely

short-spined; interior yellowish-white, more or less irregularly stained with black, exteriorly rust-eroded.

Hab. Cape of Good Hope.

Of a characteristic depressly furbelowed growth round the margin, the radiating ridges armed here and there with short sharp black and white spines. Exteriorly the shell is roughly rust-eroded, interiorly it has a peculiarly diseased look.

Species 65. (Mus. Cuming.)

PATELLA ZEBRINA. *Pat. testā ovatā, antice subattenuatā, apice acutè elevato et antice inclinato, radiatim costatā, costis obtusis, distantibus, subindistinctis, striis rugosis concentricis dense decussatis; virescente-luteā, maculis nigris acutè angulatis ornatā, intus virescente-albā, margine maculatā.*

THE ZEBRA-MARKED LIMPET. Shell ovate, slightly attenuated in front, apex sharply raised and inclined anteriorly, radiately ribbed, ribs obtuse, distant, rather indistinct, densely decussated with close-set rough striae; greenish-yellow, ornamented with sharply angled black spots, interior greenish-white, spotted at the margin.

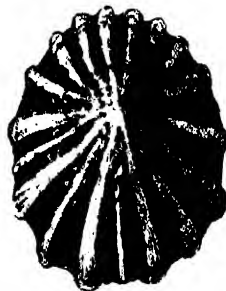
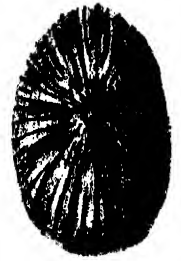
LESSON, Zool. Voy. de la Coquille, p. 417.

Lottia zebрина, Gray.

Patella variabilis pars, Sowerby.

Hab. Valparaiso.

This and *P. variabilis* are supposed to be the same species in different states; they are, however, most distinct in form, and detail of sculpture.



PATELLA.

PLATE XXVI.

Species 66. (Fig. a, b, c, Mus. Cuming.)

PATELLA ARAUCANA. *Pat. testā ovatā, nunc depressā, nunc elevatiusculā et anticē acutē inclinatā, radiatim costatā, costis rudibus, subtubulosis; lutescente-albā, costarum interstitiis intensē viridī reticulatis, intus livido-albā, medio nigro-castaneā, margine virescente, subfimbriato.*

THE ARAUCANIAN LIMPET. Shell ovate, sometimes depressed, sometimes a little raised and sharply inclined anteriorly, radiately ribbed, ribs rude, subtubulous; yellowish-white, interstices between the ribs reticulated with dark green, interior livid white, dark chestnut in the middle, margin greenish, slightly fimbriated.

D'ORBIGNY, Voy. dans l'Amérique Méridionale, p. 482. pl. 65. f. 4 to 6.

Hab. Valparaiso.

It may be doubted whether this is not also a variety of Mr. Sowerby's extremely variable *P. variabilis*, represented in the preceding plate.

Species 67. (Mus. Cuming.)

PATELLA VESPERTINA. *Pat. testā ovatā, rotundato-convexā, subdepressā, densē irregulariter liratā et sulcatā, liris levibus vel obsoletē nodosis, apice plano-obtusō; virescente, radiis lincisque viridibus nitidē pictā, intus cærulescente-albā, medio lutescente-fusco tinctā, margine subangustō.*

THE EVENING-RAYED LIMPET. Shell ovate, rotundately convex, rather depressed, densely irregularly ridged and grooved, ridges smooth or obsoletely nodose, apex flatly obtuse; greenish, neatly painted with green rays and lines, interior bluish-white, tinged with yellowish-brown in the middle, margin rather narrow.

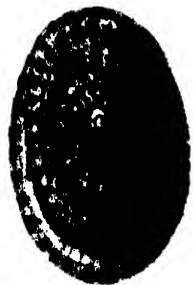
Hab. Panama and Gulf of California.

A rather depressed rotundately convex species, of a sea-green hue, neatly painted with green rays and lines.

Fig. 68. (Mus. Cuming.)

This shell proves to be an acuminate spoon-shaped form of *P. pica*, represented at Plate XIX. Fig. 45.

January, 1855.



71 b



PATELLA.

PLATE XXVII.

Species 69. (Fig. a, b, c, Mus. Cuming.)

PATELLA TOREUMA. *Pat. testā oblongo-ovatā, anticē sub-*
attenuatā, depressissimā, apice valdē antico, densē ra-
diatim liratā, liris alternatim majoribus, subcrenatis;
virescente aut luteā, purpureo et opaco-albo radiatim
variegatā et punctatā, intus plus minus iridescente-
albā, subpellucidā.

THE CHASED LIMPET. Shell oblong-ovate, slightly at-
tenuated in front, very depressed, apex very anterior,
densely radiately ridged, ridges alternately larger,
subcrenated, greenish or yellowish, radiately varie-
gated and dotted with purple and opake-white, in-
terior more or less iridescent-white, subtransparent.

Hab. Monterey, California; Hartweg.

A beautifully painted and neatly sculptured shell, of
attenuated oblong form, very depressed, with the apex
inclined very anteriorly.

Species 70. (Mus. Cuming.)

PATELLA TESTUDINALIS. *Pat. testā ovatā, suboblongā,*
acutē elevatā, lateraliter subcompressā, undique tenuis-
simē cancellato-striatā; virescente-albā vel luteā, cas-
taneo et nigro reticulato-maculatā, intus cærulescente-
albā, margine latimaculatā, medio castaneo-tinctā.

THE LITTLE TORTOISE-SHELL LIMPET. Shell ovate,
rather oblong, sharply raised, laterally slightly com-
pressed, everywhere finely cancellately striated;
greenish-white or yellow, reticulately mottled with
chestnut and black, interior bluish-white, broadly
mottled at the margin, chestnut-stained in the
middle.

MULLER, Prodrömus Zool. Dan. p. 237.

Patella tessellata, Müller.

Patella testudinaria Grœnlandica, Chemnitz.

Patella Clelandi, Sowerby.

Patella amœna, Say.

Patella chryseus, Brown.

Lottia testudinalis, Forbes.

Patelloides testudinaria, Lea.

Acmaea testudinolis, Hanley.

Patelloidea amœna, Couthony.

Lottia Antillarum, Sowerby.

Hab. Northern Seas.

This little tortoise-shell painted species prevails through-
out the northern European and American Seas, usually
much smaller, however, than the specimen here figured,
which is from East Port Maine, United States. It is
found plentifully in Greenland, and was dredged abun-
dantly in Wellington Channel by Captain Sir E. Belcher,
during the recent Arctic searching expedition of the *As-*
sistance and *Resolute*.

Species 71. (Mus. Cuming.)

PATELLA EARLI. *Pat. testā rotundato-ovatā, anticē sub-*
attenuatā, convexo-elevatā, apice anticē inclinato, ra-
diatim liratā, liris parvis, perpaucis, distantibus, in-
terstitiis irregulariter elevato-striatis; virescente, oli-
vaceo-nigricante latē undato-variegatā, intus pellucido-
iridescente, medio lacteā.

EARL'S LIMPET. Shell rotundately ovate, slightly at-
tenuated in front, convexly raised, apex inclined an-
teriorly, radiately ridged, ridges small, very few and
distant, with the interstices irregularly elevately stri-
ated; pale green, broadly wave-variegated with olive-
black, interior transparently iridescent, milk-white
in the middle.

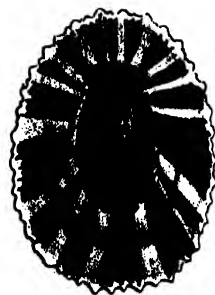
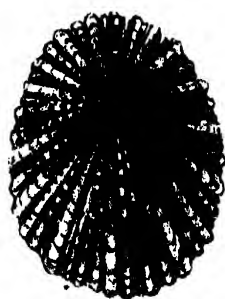
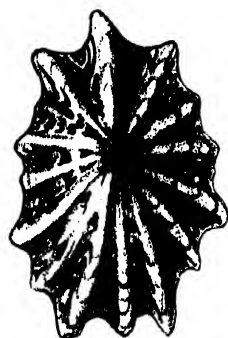
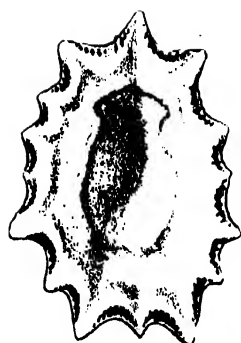
Hab. New Zealand; Earl.

This is of the same local typical form as *P. redimiculum*,
but peculiar in its high rounded growth and broad waved
painting.

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776



PATELLA.

PLATE XXVIII.

Species 72. (Fig. a, b, c, Mus. Cuming.)

PATELLA SACCHARINA. *Pat. testā ovatā, acutē angulatō-conveẏā, crassiusculā, radiatim costatā, costis fortibus, compressis, variis, plerumque septem majoribus, interstitiis radiatim liralis; albā, inter costas maculis curvis nigris plus minus densē linctā, intus albā, nigro-marginatā.*

THE SACCHARINE LIMPET. Shell ovate, sharply angularly convex, rather thick, radiately ribbed, ribs strong, compressed, various, generally seven principal ones, interstices radiately ridged; white, more or less thickly painted between the ribs, with curved black blotches, interior white, black-edged.

LINNEUS, Syst. Nat. (12th edit.) p. 1258.

Astrolepas saccharina, Argenville.

Astrolepas tigerina, Martini.

Hab. Philippine Islands; Cuming.

A solid strongly ribbed white shell, painted more or less densely with very characteristic crescent-shaped black blotches in the interstices.

Species 73. (Mus. Cuming.)

PATELLA FUEGIENSIS. *Pat. testā ovali, tenuiculā, semipellucidā, subcompresso-elevatā, apice rotundato, anticē inclinato, radiatim liratā, liris tenuibus, numerosis, striis concentricis densē decussatis; virescente, castaneo-fuscescente plus minus tinctā et maculatā, apice æneo, intus iridescente-æneā, radiatim sulcatā, sulcis interdum partim obsoletis.*

THE FUEGO LIMPET. Shell oval, rather thin, semitransparent, rather compressly raised, apex rounded, in-

clined anteriorly, radiately ridged, ridges thin, numerous, densely crossed with concentric striae; greenish, more or less stained and blotched with chestnut-brown, apex bronze, interior iridescent-bronze, radiately grooved, grooves sometimes partially obsolete.

Hab. Tierra del Fuego. Falkland Islands.

A delicate subpellucid bronzed species, elegantly many-ridged, of a pale greenish texture, partially, and sometimes almost entirely, stained and blotched with reddish-chestnut.

Species 74. (Mus. Cuming.)

PATELLA MARGARITARIA. *Pat. testā rotundato-ovatā, subattenuatā, subacutē erectē elevatā, anticē inclinatā, apice obtusā, radiatim costatā et liratā, costis rudibus, tumidiusculis, nodosis, interstitiis muricatis; costis sordidē albidis, interstitiis purpureo-nigris, muricibus opaco-albis, intus cornē, vividē purpureo-radiatā.*

THE PEARL-SHED LIMPET. Shell rotundately ovate, interiorly a little attenuated, rather sharply erectly raised, inclined anteriorly, obtuse at the apex, radiately ridged and ribbed, ribs rude, rather swollen, nodose, interstices prickly; ribs dull white, interstices purple-black, prickles opaque-white, interior horny, richly purple-rayed.

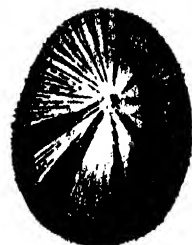
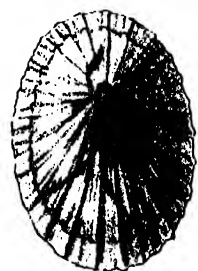
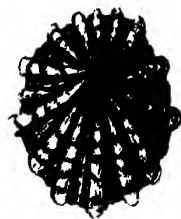
CHEMNITZ, Conch. Cab. vol. xi. p. 180. pl. 197. f. 1914, 1915.

Patella ornata, Dillwyn.

Hab. New Zealand; Chemnitz.

A very distinct species, rayed with light rude, nodose ribs, the interstices being dark purple-black, set with characteristic opaque-white prickles.





PATELLA.

PLATE XXIX.

Species 75. (Mus. Cuming.)

PATELLA LIVESCENS. *Pat. testā ovatā, tenuiculā, depresso-convexā, apice subacutē mucronatā, radiatim densē granulato-striatā, striis subundulatis, apice subantico; pellucido-livescente, nigricante-purpureo radiatā, radiis interdum obliquē maculatis, intus iridescente-argenteā, plus minus pellucidā.*

THE BLUE-TINGED LIMPET. Shell ovate, rather thin, depressly convex, rather sharply pointed at the apex, radiately densely granulately striated, striæ slightly waved, apex rather anterior; pellucid blue-green, rayed with blackish-purple, rays sometimes broken up into opaque blotches, interior iridescent-silvery, more or less transparent.

Hab. Mazatlan, Gulf of California.

A very delicate subpellucid greenish-blue shell, painted with dark purple rays, which show through into the interior. The sculpture consists of numerous slightly waved granuled lines.

Species 76. (Mus. Cuming.)

PATELLA SPECTRUM. *Pat. testā ovatā, subdepressā, anticē subacutē acuminatā, ætate crassissimā, radiatim costatā, costis crassis, rudibus, compressæ squamatis, interstitiis rugoso-striatis; ferrugineo-albā, squamis in testā juniore nigris, intus albā.*

THE SPECTRE LIMPET. Shell ovate, rather depressed, anteriorly rather sharply acuminate, very thick with age, radiately ribbed, ribs thick, rude, compressly scaled, interstices roughly striated; rust-white, scales in the young shell black, interior white.

NUTTALL, Jay's Catalogue of Shells, p. 39.

Hab. Upper California.

A very characteristic rough-ribbed shell, the ribs being armed with scales, which, in the young shell, are strikingly cinder-black.

Species 77. (Mus. Cuming.)

PATELLA INEADIATA. *Pat. testā ovatā, elevato-convexā, lateraliter subcompressā, undique subobsoleto radiato-clathratā; albā, lineis perpaucis rufis obscure bifariam radiatā, lineis irregularibus, distortis, intus albā, lineis rufis distinctis, medio castaneā.*

THE IN-RAYED LIMPET. Shell ovate, elevately convex, somewhat compressed at the sides, everywhere rather obsoletely radiately latticed; whitish, obscurely rayed with a very few red lines in pairs, lines irregular, distorted, interior white, red lines distinct, chestnut in the middle.

Hab. — ?

A deep cup-like opaque-white shell, obscurely latticed throughout, irregularly rayed with a few straggling red lines, which are most distinctly seen in the interior.

Species 78. (Mus. Cuming.)

PATELLA DISCORS. *Pat. testā subquadrato-ovalā, depressā, fortiter elevato-lineatā, circa apicem tuberculato-corrugatā; albā, lineis intensē cæruleo-nigris, intus albā, margine nigro-lineato, latiusculo, testā juniore extus virescente tinctā.*

THE DIFFERING LIMPET. Shell subquadrately ovate, depressed, strongly elevately lined, round the apex tubercularly crumpled; whitish, lines strongly blue-black, interior white, border black-lineated, rather broad, young shell green-tinged without.

PHILIPPI, Abbild. und Besch. Conch. pl. 2. f. 6.

Hab. Mazatlan, Gulf of California; Lieut. Shipley.

A depressly convex shell, whitish and peculiarly crumpled round the apex, then densely sculptured with raised blue-black lines.

Species 79. (Mus. Cuming.)

PATELLA OPEA. *Pat. testā ovatā, anticē attenuatā, subdepressā, radiatim tenuiliratā, liris granulatis, versus apicem obsoletis; albā, interstitiis versus marginem nigro-fuscis, obscure sex-radiatā, intus albā, margine latiusculo, nilidē lineato.*

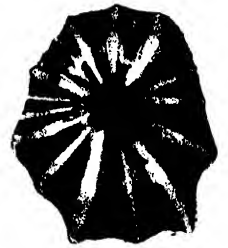
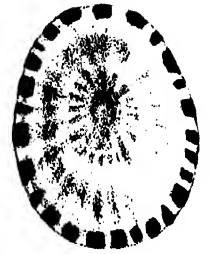
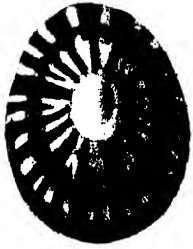
THE EYEBROW LIMPET. Shell ovate, attenuated in front, rather depressed, radiately finely ridged, ridges granuled, obsolete towards the apex; whitish, interstices towards the margin black-brown, obscurely six-rayed, interior white, margin rather broad, neatly lineated.

NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Sandwich Islands.

A rather depressed shell, finely granulately ridged, the interstices being coloured towards the margin with rust-black.





PATELLA.

PLATE XXX.

Species 80. (Mus. Cuming.) •

PATELLA ASTER. *Pat. testā ovatā, anticē subattenuatā, subacutē depresso-conicā, anticē inclinatā, radiatim densē striatā, striis elevatis, obtusē granulatis, subundulatis; nigro-purpureā, luteo-albo radiatā, radiis acutis, perdistinctis, intus iridescente-corneā, subpellucidā.*

THE STAR LIMPET. Shell ovate; a little attenuated in front, rather sharply depressly conical, inclined anteriorly, radiately densely striated, striæ raised, obtusely granuled, a little waved; blackish-purple, rayed with yellowish-white, rays sharp, very distinct, interior iridescent-horny, subtransparent.

Hab. — ?

Chiefly characterized by the very decided outline of the rays.

Species 81. (Mus. Cuming.)

PATELLA NUTTALLIANA. *Pat. testā ovatā, acuminato-convexā, apice subobtusā, rudē striatā, striis hic illic obsoletis; lutescente-albā, strigis irregularibus ustulato-nigris vividē radiatā, intus albā, margine nigro maculatā.*

NUTTALL'S LIMPET. Shell ovate, acuminate convex, rather obtuse at the apex, rudely striated, striæ here and there obsolete; yellowish-white, rayed with vivid burnt-black irregular streaks, interior white, margin blotched with black.

Hab. Oregon.

An erect acuminate convex shell, rather compressed at the sides, painted throughout with very striking zebra-like burnt-black stripes.

Species 82. (Mus. Cuming.)

PATELLA LANX. *Pat. testā hexagono-ovatā, anticē attenuatā, subplano-depressā, rudē angulatā et striatā, angulis obtusis; nigrā, ad angulos albicante, intus cærulescente, medio nigricante-castaneā, lineatā, margine nigrā.*

THE PLATTER LIMPET. Shell hexagonally ovate, attenuated in front, rather flatly depressed, rudely angled

and striated, angles obtuse; black, whitish at the angles, interior bluish, blackish-chestnut in the middle, lined, black at the margin.

Hab. Japan.

A depressed roughly angled shell, painted black, except on the angles and in some of the interstices.

Species 83. (Mus. Cuming.)

PATELLA AMUSSITATA. *Pat. testā ovatā, anticē subattenuatā, convexo-depressā, apice subautico, densē striatā, striis obtusē elevatis, subscabrosis, paululum undulatis; virescente vel olivaceo-luteā, purpureo obscurē maculatā et radiatā, et indistinctē albigulatā, intus iridescente-corneā, subpellucidā.*

THE MOSAIC LIMPET. Shell ovate, a little attenuated in front, convexly depressed, apex rather anterior, densely striated, striæ obtusely raised, subscabrous, a little waved; greenish or olive-yellow, obscurely spotted and rayed with purple, and indistinctly white-dotted, interior iridescent-horny, subpellucid.

Hab. China and the Philippine Islands.

A depressly convex subhorny shell, densely scabrously striated, olive-green or yellowish, freckled with purple and white dots.

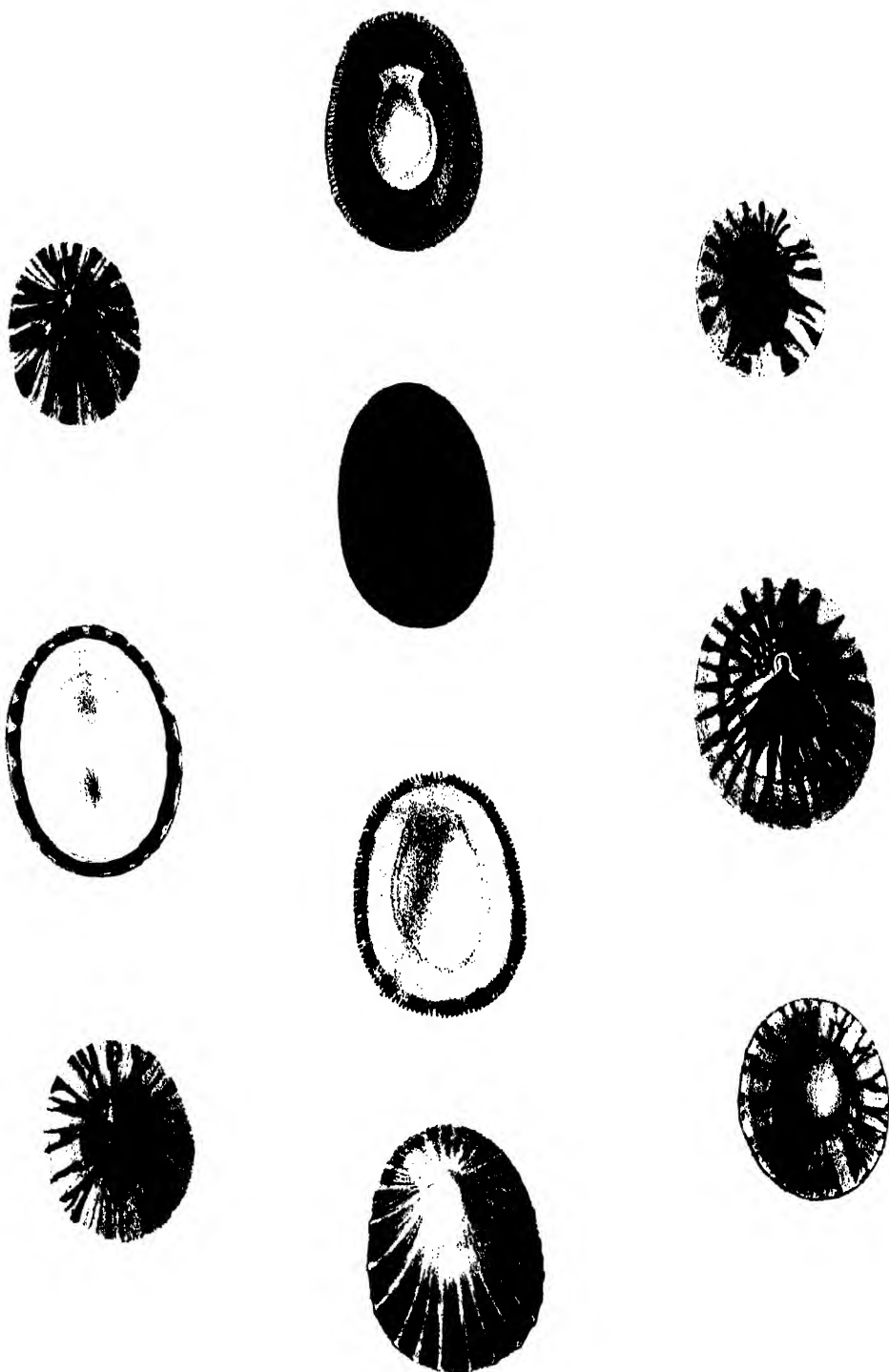
Species 84. (Mus. Cuming.)

PATELLA NIGRO-SULCATA. *Pat. testā ovatā, solidiusculā, radialim sulcatā, sulcis angustis, subdistantibus; rudē cretaceā, albā, sulcis plus minus nigro-linctis, intus lutescente-albā, margine obscurē lineato.*

THE BLACK-GROOVED LIMPET. Shell ovate, rather solid, radiately grooved, grooves narrow, rather distant; rough chalk-white, grooves more or less black, interior yellowish-white, border faintly lined.

Hab. — ?

A peculiar chalk-white species, linearly grooved throughout, the grooves being narrow, rather impressed, and black-stained.



PATELLA.

PLATE XXXI.

Species 85. (Mus. Cuming.)

PATELLA DEPSTA. *Pat. testā ovatā, tenui, subdepressā, medio elevatā, ad latera subcompressā, apice aculo, anticē minutē uncinato, radiatim striatā, striis prope marginem elevatis; rufo-castaneā, virescente-luteo interdum obscure radiatā, intus livido-corneā.*

THE TANNED LIMPET. Shell ovate, thin, rather depressed, raised in the middle, rather compressed at the sides, apex sharp, anteriorly minutely hooked, radiately striated, striae raised towards the margin; reddish-chestnut, sometimes faintly rayed with greenish-yellow, interior livid-horny.

Hab. Macao and Island of St. Paul.

A nearly smooth reddish-chestnut shell, with a sharp minutely hooked apex.

Species 86. (Mus. Cuming.)

PATELLA LUZONICA. *Pat. testā rotundato-ovatā, subdepressā, radiatim tenuiliratā, liris granulatis, apice aculo, antico, minutē uncinato; pellucido-luteā, subcorneā, maculis grandibus nigris promiscuē inquinatā, intus pellucidā, subiridescente, medio intensē castaneā.*

THE LUZON LIMPET. Shell rotundately ovate, rather depressed, radiately finely ridged, ridges granuled, apex sharp, anterior, minutely hooked; transparent-yellow, rather horny, promiscuously stained with large black blotches, interior transparent, subiridescent, dark chestnut in the middle.

Hab. Island of Luzon, Philippines; Cuming.

Of bright transparent-yellow substance, stained with large promiscuous blotches of black, characteristic in pattern and distribution.

Species 87. (Mus. Cuming.)

PATELLA VERRICULATA. *Pat. testā ovatā, convexā, interdum subdepressā, apice subantico, obtuso, densē tenuiliratā, striis paululum undulatis; lutescente aut virescente, fusco-nigro plus minus densē strigatā et reticulatā, intus cærulescente-albā, margine latiusculo, nigro-maculato.*

THE NETTED LIMPET. Shell ovate, convex, sometimes rather depressed, apex subanterior, obtuse, densely finely striated, striae a little waved; yellowish or greenish, more or less thickly streaked and netted with

brown-black, interior bluish-white, border rather broad, black-spotted.

Hab. California.

The characteristic painting of this species is a densely woven brown-black network, which, except in the vicinity of the apex, is more or less filled up, or broken into streaks.

Species 88. (Mus. Cuming.)

PATELLA USTULATA. *Pat. testā subquadrato-ovatā, anticē paululum attenuatā, posticē convexo-depressā, anticē tumido-umbonatā, apice obtuso, radiatim elevato-striatā, striis prope marginem scabrosis; ustulato-rufā, fuscis angustis albis subdistantibus nitidē radiatā, striis prope marginem plus minus nigris, intus albā.*

THE SCORCHED LIMPET. Shell somewhat squarely ovate, a little attenuated in front, posteriorly convexly depressed, anteriorly tumidly umbonated, apex obtuse, radiately elevately striated, striae scabrous next the margin; burnt-red, neatly rayed with rather distant narrow white bands, striae more or less black next the margin, interior white.

Hab. — ?

Nothing is known of the locality of this very characteristic species, fringed, as it were, with burnt-brown and black colouring, interrupted with a regular series of distinct narrow white bands.

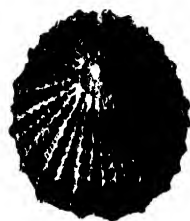
Species 89. (Mus. Cuming.)

PATELLA SCALATA. *Pat. testā ovatā, subacutā convexā, apice vix centrali, radiatim obtusē striatā, et hic illic lineari-sulcatā; livido-albicante, fuscis nigris peculiariter bifurcatis aut diagonaliter lineari-strigatis radiali, intus subpellucido-corneā.*

THE LADDERED LIMPET. Shell ovate, rather sharply convex, apex scarcely central, radiately obtusely striated, and here and there linearly grooved; livid-white, rayed with black bands, peculiarly bi-forked, or diagonally linearly streaked, interior subtransparent horny.

Hab. Philippine Islands; Cuming.

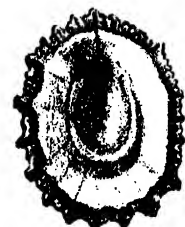
Distinguished by a characteristic pattern of black diagonally blotched and barred rays, upon a livid-white ground.



936



937



944



938

PATELLA.

PLATE XXXII.

Species 90. (Mus. Cuming.)

PATELLA ACULEATA. *Pat. testā suboblongo-ovatā, tumido-conoideā, apice antico, radiatim costatā, costis acutè compressis, aculeato-squamatis; albā, aurantio-ferrugineo tinctā, intus albicante, aurantio tinctā.*

THE PRICKLY LIMPET. Shell somewhat oblong-ovate, tumidly conoid, apex anterior, radiately ribbed, ribs sharply compressed, prickly-scaled; white, tinged with orange-rust, interior whitish, orange-tinged.

Hab. — ?

A deeply convex shell, rayed throughout with very characteristic prickly-scaled narrowly compressed ribs.

Species 91. (Mus. Cuming.)

PATELLA GUTTATA. *Pat. testā orbiculato-ovatā, subdepressā, apice antico, radiatim liratā, liris in nodulis irregularibus disruptis; albidā, plus minus nigro-tinctā, nodulis intensè nigris, intus cærulescente, medio rufescente.*

THE DROP-MARKED LIMPET. Shell orbicularly ovate, rather depressed, apex anterior, radiately ridged, ridges broken up into irregular nodules; whitish, more or less stained with black, nodules intense black, interior bluish, reddish in the middle.

D'ORBIGNY, Moll. des Isles Canaries, vol. ii. p. 98. pl. 7. f. 13, 15.

Hab. Teneriffe, Canaries.

The radiating ridges of black nodules in this species, constitute a very characteristic feature.

Species 92. (Mus. Cuming.)

PATELLA DIRA. *Pat. testā ovatā, erecto-conoideā, densè radiatim costatā et liratā, costis lirisque in verruculis creberrimè disruptis; intensè cæruleo-atrā, intus subiridescente.*

THE DISMAL LIMPET. Shell ovate, erectly conoid, densely radiately ridged and ribbed, ribs and ridges very

closely broken up into small warts; dark blue-black, subiridescent in the interior.

Hab. — ?

Although a similarity prevails between the figures of this and the preceding species, they are very different; *P. dira* being of deep erectly conical form, rayed throughout with close-set ribs and ridges, crenated with small tumid warts.

Species 93. (Mus. Cuming.)

PATELLA IMBRICATA. *Pat. testā ovatā, tumido-converā, apice antico, obtuso, radiatim multicostatā, costis conflatis, vix elevatis, undique densè acutè imbricatis; intensè cæruleo-nigrā, intus plumbeo-cæruleā, medio aurantio-ferrugineā.*

THE TILED LIMPET. Shell ovate, tumidly convex, apex anterior, obtuse, radiately many-ridged, ribs close-set, scarcely raised, everywhere densely sharply imbricated; dark blue-black, interior lead-blue, orange-rust in the middle.

Hab. New Zealand.

Of very regular tumidly convex growth, beautifully densely imbricated throughout.

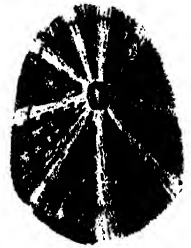
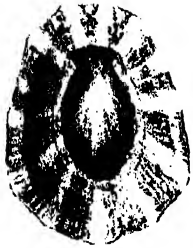
Species 94. (Mus. Cuming.)

PATELLA SQUAMIFERA. *Pat. testā ovatā, subdepressā, crassiusculā, apice fere centrali, radialim rugosè costatā et liratā, costis lirisque irregulariter rudè squamatis; albidā, cinereo et nigro tinctā, intus cærulescente-albā.*

THE SCALY LIMPET. Shell ovate, somewhat depressed, rather thick, apex nearly central, radiately roughly ribbed and ridged, ribs and ridges irregularly rudely scaled; whitish, tinged with ash and black, interior bluish-white.

Hab. — ?

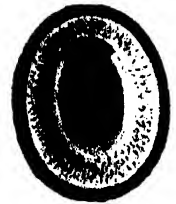
This is a solid ash-coloured shell, roughly sculptured throughout with irregular scaly ribs and ridges.



974



98a



99b



98b

PATELLA.

PLATE XXXIII.

Species 95. (Mus. Cuming.)

PATELLA SANGUINALIS. *Pat. testâ suboblongo-ovatâ, tenui, pellucidâ, lateraliter leviter compressâ, apice subacuto, antico, radiatim densè irregulariter striatâ; pallidè cornéâ, lineis tenuibus pallidè sanguineis undique undato-reticulatâ.*

THE BLOOD-TINGED LIMPET. Shell suboblong-ovate, thin, transparent, slightly compressed at the sides, apex rather sharp, anterior, radiately densely irregularly striated; pale horny, everywhere wave-reticulated with pale red thin lines.

Hab. — ?

Of thin subtransparent horny texture, and rather compressly ovate form, delicately painted throughout with a network of pale red waved lines.

Species 96. (Mus. Cuming.)

PATELLA STELLULARIA. *Pat. testâ ovatâ, anticè vix attenuatâ, subconvexâ, radiatim noduloso-lirâtâ; castaneo-brunnâ, stellâ albâ ad apicem, intus pellucidâ, subiridescente.*

THE STARRED LIMPET. Shell ovate, scarcely attenuated in front, slightly convex, radiately nodosely ridged; chestnut-brown, with a white star on the apex, interior pellucid, subiridescent.

QUOY and GAIMARD, Voyage de l'Astrolabe, vol. iii. p. 347. pl. 70. f. 18 and 20.

Hab. New Zealand.

Readily distinguished by a rather large irregular star-pattern of white upon a chestnut-brown ground.

Species 97. (Mus. Cuming.)

PATELLA ARTICULATA. *Pat. testâ hexagono-ovatâ, anticè attenuatâ, subplano-depressâ, undique radiatim lirâtâ et striatâ; olivaceâ, radiis lutescentibus ad angulos, liris purpureo-nigro et albo articulatis, intus subargenteâ.*

THE ARTICULATED LIMPET. Shell hexagonally ovate, attenuated in front, rather flatly depressed, everywhere radiately ridged and striated; olive, with yellow rays at the angles, ridges articulated with purple-black and white, interior rather silvery.

Hab. Island of Ticao, Philippines.

A rather compressly flattened species, divided on the surface into seven to nine subangular areas, rayed with neatly articulated ridges.

Species 98. (Mus. Cuming.)

PATELLA CHILOENSIS. *Pat. testâ rotundato-ovatâ, anticè subacuminatâ, acutè conoidè, elevatâ, apice subcentrali, radiatim costatâ, costis retusis, subobsoletis; fumeo-nigro irregulariter lineatâ et strigatâ, interstitiis albidis perpaucis promiscuis, intus subargenteâ.*

THE CHILOE LIMPET. Shell rotundately ovate, a little acuminate in front, sharply conoid, elevated, apex nearly central, radiately ribbed, ribs worn, nearly obsolete; irregularly stained and streaked with smoky-black, whitish, interstices very few and promiscuous, interior a little silvery.

Hab. Island of Chiloe; Cuming.

A characteristic deeply conoid shell, almost entirely smoky-black, rust-tinged towards the apex, with white appearing promiscuously at remote intervals.

Species 99. (Mus. Cuming.)

PATELLA STRIATA. *Pat. testâ rotundato-ovatâ, subdepressâ, apice valdè antico, acuto, radiatim densè lirâtâ, liris circa apicem subobsoletis; virescente-olivaceâ, intus vividè virescente, nucleo fuscescente, margine latiusculo, nigricante-olivaceo.*

THE STRIATED LIMPET. Shell rotundately ovate, rather depressed, apex very anterior, sharp, radiately densely ridged, ridges nearly obsolete about the apex; greenish-olive, interior bright green, nucleus light brown, border rather broad, blackish-olive.

Patelloidea striata, Quoy and Gaimard, Voyage de l'Astrolabe, Moll. pl. 71. f. 8-11.

Hab. Galapagos Islands; Cuming.

An obscure greenish-olive species, with mostly a bright green interior and rather broad dark olive border. The surface, which is rather depressed, is densely radiately elevately striated, but the striae are only faintly developed round the apex.

١٧٧

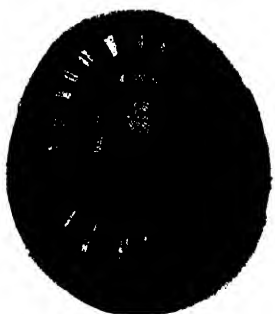
١٧٨



101 b



102 b



103 b



104 b

PATELLA.

PLATE XXXIV.

Species 100. (Mus. Cuming.)

PATELLA LACINIATA. *Pat. testā oblongo-ovalā, subacutē convexā, lateraliter subcompressā, radiatim densē elevato-striatā; albidā, lineis numerosis tenuibus rufis undiquē promiscuē reticulato-radiatā, reticulo circa apicem interruptē pervio, intus cærulescente-albā.*

THE FRINGED LIMPET. Shell oblong-ovate, rather sharply convex, laterally slightly compressed, radiately densely elevately striated; whitish, reticulately rayed everywhere promiscuously with numerous fine red lines, network round the apex interruptedly open, interior bluish-white.

Hab. Australia.

Distinguished by a densely pencilled elongated network of red-brown lines, which is more or less interruptedly open around the apex.

Species 101. (Mus. Cuming.)

PATELLA LEUCOPHÆA. *Pat. testā rotundato-ovalā, depressiusculā, medio subacutē elevatā, radiatim obscurē costatā et striatā, costis irregularibus, fere obsolete; nigricante-viridi, maculis albis prope marginem obscurē biserialim tessellatā, intus virescente-albā, medio intensē castaneā.*

THE WHITE-SPOTTED LIMPET. Shell rotundately ovate, rather depressed, somewhat sharply raised in the middle, radiately obscurely ribbed and striated, ribs irregular, almost obsolete; very dark green, obscurely tessellated near the margin with two rows of white blotches, interior greenish-white, dark chestnut in the middle.

NUTTALL, Jay's Catalogue of Shells, p. 38.

Hab. Upper California.

A very dark greenish shell, encircled near the margin with two rows of faint whitish blotches.

Species 102. (Mus. Cuming.)

PATELLA PENICILLATA. *Pat. testā ovalā, subplano-convexā, radiatim rugoso-liratā et sulcatā, plerumque multo erosā, apice parvo, acuto, antico; albā*

intensē fusco penicillatis, intus albidā, fusco medio et ad marginem lineatā.

THE PENCILLED LIMPET. Shell ovate, rather flatly convex, radiately roughly ridged and grooved, generally much eroded, apex small, sharp, anterior; whitish, grooves pencilled with dark brown, interior whitish, lined in the middle and at the edge with brown.

Hab. Valparaiso.

A rather flatly convex eroded white species, pencilled in the radiating grooves with interrupted brown.

Species 103. (Mus. Cuming.)

PATELLA CANESCENS. *Pat. testā ovalā, anticā subattenuatā, convexā, radiatim rugoso-liratā et sulcatā; tiris promiscuē albis et nigris, intus subpellucidā.*

THE GREY-HAIRED LIMPET. Shell ovate, a little attenuated in front, radiately rugosely ridged and grooved; ridges promiscuously black and white, interior subpellucid.

Hab. — ?

This shell is much worn round the apex, but a very characteristic black and white sculpture covers the remaining surface.

Species 104. (Mus. Cuming.)

PATELLA TENERA. *Pat. testā ovalā, tenniculā, depressā, apice parvo, acuto, antico, radiatim strictā, striis elevatis, subfuniculatis, striis minutis concentricis cancellatis; lutescente, nigricante-viridi promiscuē maculatā et variegatā, intus cærulescente, subpellucidā.*

THE THIN LIMPET. Shell ovate, rather thin, depressed, apex small, sharp, anterior, radiately striated, striraised, somewhat corded, cancellated with minute concentric strim; yellowish, promiscuously spotted and variegated with blackish-green, interior bluish, subtransparent.

C. B. ADAMS, Contributions to Conchology.

Hab. — ?

A depressed yellowish shell, prettily variegated and blotched with blackish-green, which is seen through in the interior.



107b



107b



108b



108b

PATELLA.

PLATE XXXV.

Species 105. (Mus. Cuming.)

PATELLA FUNGUS. *Pat. testā ovatā, depresso-conoideā, apice elenato, subcentrali, radiatim densē costatā et liratā, costis lirisque angustis, parvis, undique tenuinodulatis; sordidē cinereā, circa apicem et prope marginem rufescente-fusco punctatā, nodulis albicantibus, intus semipellucido-iridescente.*

THE FUNGUS LIMPET. Shell ovate, depressly conoid, apex raised, subcentral, radiately densely ribbed and ridged, ribs and ridges narrow, small, everywhere finely noded; dull ash, dotted round the apex and near the margin with reddish-brown, with nodules whitish, interior semi-transparent, iridescent.

Tectura fungus, Meuschen.

Hab. West Indies.

A dull ash depressly conoid shell, densely rayed with finely noded ribs and ridges, sparingly marked with reddish-brown dots, which are seen most distinctly in the interior of the shell.

Species 106. (Mus. Cuming.)

PATELLA FLOCCATA. *Pat. testā ovatā, convexo-depressā, apice anticē inclinato, planato, radiatim tenuiliratā, liris filosis, subundatis, striis concentricis eximie crenulatis; olivaceo-viridi, floccis albis profusē aspersā, intus rivicē cæruleo-viridi.*

THE SNOW-FLAKE LIMPET. Shell ovate, convexly depressed, apex inclined anteriorly, flattened, radiately finely ridged, ridges thread-like, slightly waved, delicately crenulated with concentric striae; olive-green, profusely sprinkled with white flakes, interior vivid blue-green.

Hab. New Zealand; Earl.

A delicate rather compressly convex species, sculptured with fine thread-like slightly waved ridges, and profusely radiately dashed with white flakes upon a dark olive-green ground.

Species 107. (Mus. Cuming.)

PATELLA UMBONATA. *Pat. testā globoso-convexā, apice omnino antico, acutē uncinato, radiatim liratā, liris paucis, irregularibus, obtusē crenatis; cinereo-nigrā, punctis albis impressis sculpturatā, punctis magis numerosis versus marginem, intus cærulescente-albā, medio castaneā.*

THE UMBONED LIMPET. Shell globosely convex, apex altogether anterior, sharply hooked, radiately ridged, ridges few, irregular, obtusely crenated; ash-black,

sculptured with white impressed punctures, punctures more numerous towards the margin, interior bluish-white, chestnut in the middle.

NUTTALL, Jay's Catalogue of Shells, p. 37.

Hab. Upper California.

A globosely convex species, with the apex sharply inclined over the front, of a rough ash-black substance, chipped, as it were, with white punctures, which are more numerous as they approach the basal margin.

Species 108. (Mus. Cuming.)

PATELLA AFFINIS. *Pat. testā oblongo-ovatā, depressā, apice valdē antico, parvo, subarcto, radiatim liratā et striatā, liris striisque numerosis, obtusis, subundatis; nigricante-olivaceā, radiis latis obliquē sanguineo-maculatis ornatā, intus subpellucido-iridescente.*

THE ALLIED LIMPET. Shell oblong-ovate, depressed, apex very anterior, small, rather sharp, radiately ridged and striated, ridges and striae numerous, obtuse, slightly waved; dark olive, ornamented with obliquely blood-blotched broad rays, interior sub-transparent, iridescent.

Hab. New Zealand.

Two or three species, it will be seen, have been described of this same typical form from New Zealand, all essentially distinct in regard to sculpture. In the present species the surface is carved throughout with simple smooth slightly waved close-set ridges and striae.

Species 109. (Mus. Cuming.)

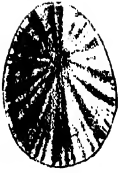
PATELLA PRUINOSA. *Pat. testā subdepresso-ovatā, cornedā, apice antico, minutē acutē uncinato, radiatim tenuissimē liratā, liris irregularibus, undatis, striis minutis concentricis decussatis; subpellucido-olivaceā, punctis vividē cæruleo-viridibus radiatā, maculis nigricante-olivaceis anticē tinctā.*

THE FROSTED LIMPET. Shell subdepressly ovate, horny, apex anterior, minutely sharply hooked, radiately very finely ridged, ridges irregular, slightly waved, decussated with minute concentric striae; subpellucid-olive, rayed with bright blue-green dots, and stained in front with dark olive blotches.

KRAUSS, Südafric. Mollusken, p. 56. pl. 3. f. 9.

Hab. Table Bay.

A semitransparent horny depressly ovate shell, with a small sharply hooked apex, comparatively smooth, distinguished by a peculiar rayed sprinkling of blue-green dots of a bright metallic hue.



111b



110b



112a



113b



114a



114b

